R. M. BIRD

N. E. SLACK

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RESIDENTIAL PROPERTY TAX RELIEF IN ONTARIO

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R.M. Bird and N.E. Slack

Residential Property Tax Relief in Ontario

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Preface

The original purpose of this study was to investigate the incidence and effects of two recent provincial government programs launched with the avowed object of relieving the perceived pressure on residential property taxpayers in Ontario: the property tax stabilization program of 1973 and the property tax credit introduced in 1972. These two programs differ sharply in their mode of operation, but both clearly arose, at least in part, from concern over the burden of the property tax, and were intended primarily to lessen that burden. A principal object of this study continues to be to appraise how successful these programs were in achieving this objective.

It soon became apparent, however, that this question could not be approached without a much clearer understanding both of the role of the property tax in Ontario's fiscal system and of the incidence of the residential property tax itself. The present study thus begins with an extended consideration of these broader issues in order to provide the needed background. Unsurprisingly, perhaps, it turns out that the very tentative answers reached in the first part of the study really determine to a large extent our assessment of these measures for residential property tax relief.

This study thus covers both more and less than was originally intended: more in the sense that the theoretical and empirical basis of assumptions about the incidence of the property tax is explored at length; less in that our inability to reach any strong conclusion on incidence inevitably renders our appraisal of the distributional effects of the credit and the grant rather inconclusive also. Nevertheless, although this study probably raises more questions than it supplies answers, this path has been followed not in wanton disregard of the needs of policymakers in this area but because we think it useful and interesting to demonstrate, once again, the fragile foundations of reasoning and knowledge upon which so many public policy measures are necessarily erected. If this study causes some to doubt the logical basis and wisdom of certain measures discussed here, we shall be happy, and if it provokes officials and other scholars to attempt to answer some of the key unanswered questions we raise - or to rebut some of the inferences which we draw - we shall be more than satisfied.

One other word of caution to the reader seems called for here: complicated as it may appear, this study really leaves out of account far more aspects of the property tax than it considers. Except in passing, for example, nothing is said about the taxation of commercial and industrial property (and the related possibility of 'exporting' taxes from one jurisdiction to another).[1] Nor are the allocative effects of the property tax on land use development as a consequence of its effects on the timing of land development (see Nowlan, 1976a, b) and on municipal land use decisions ('fiscal zoning')[2] mentioned, except incidentally. Much the same is true of the many traditional questions that might be raised about property taxes: their elasticity and adequacy as a source of municipal revenue,[3] the problems of assessment and administration,[4] exemption policy,[5] and so on and on. Finally, although some reference is made in chapter two to the role of the tax in the provincial-municipal system as a whole, no attempt is made here to deal with this complex and important question in any comprehensive fashion.[6]

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[1] The only really thorough empirical study of 'tax exporting' appears to be McLure (1967), where it is estimated that between 11 and 26 per cent of property taxes levied in different states in 1962 were exported in the long run, with the proportion depending primarily on the importance of taxes in manufacturing, mining, and utilities. McLure (1976) comments on the relation between this work and the 'new view' of property tax incidence (see chapter three below). Maslove (1972) contains some estimates of tax exporting in Canada. A more detailed study bearing on this subject by Ballentine, Dean, and Thirsk is now in progress for the federal Ministry of State for Urban Affairs.

[2] The theory of 'fiscal zoning' is clearly set out in Hamilton (1973). For Canadian lamentations on the prevalence of the practice, see Plunkett (1974, 1976).

[3] For a thorough discussion of this issue, see Gillespie (1974); see also Oates (1975), especially p. 157, where it is argued that, contrary to what governments tend to think, '... a good case can be made for opting for a relatively inelastic structure that will force frequent recourse to the electorate.' See also chapter two below.

[4] The most thorough review of this issue in Ontario is still the report of the Ontario Committee on Taxation (1967, vol. II). See also chapter one below.

[5] *Ibid.*; also Intergovernmental Committee on Urban and Regional Research (1974); and Commission on the Reform of Property Taxation in Ontario (1977).

[6] An outstanding review of this question, albeit somewhat dated, is Dupré (1967). See also chapters two and eight below.

The property tax may thus be considered from many different perspectives – as a part of the fiscal system as a whole, as a component of the provincial-municipal system, or in terms of its effects on housing policy, for example. Only a small subset of the relevant issues has been considered in this study. Nevertheless, it seems safe to conclude that this tax, and concern about this tax, will continue to be matters of public interest for years to come. Our hope is that even this limited study will help raise the level of this continuing discussion above that which has prevailed in the past, first, by making it clear that there are no simple answers, and, second, by suggesting some tentatively complex answers to a few relevant questions.

The authors have benefitted greatly from earlier discussion of some of the material in this study during two seminars held under the auspices of the Ontario Economic Council and from comments by the staff and referees of the Council. Useful comments have also been received on earlier versions of chapter three from Johannes Linn, Oliver Oldman, Michael Rennie, and Wayne Thirsk and on the econometric work reported in chapter eight from David Foot. Martin Samuels proved indefatigable at producing endless drafts of this study. Finally, we are most grateful for the co-operation and assistance extended by various officials of the Government of Ontario, the Government of Manitoba, and Statistics Canada, none of whom are in any way to be held responsible for the views expressed here.

RESIDENTIAL PROPERTY TAX RELIEF IN ONTARIO

1

The property tax in Ontario

No tax has been more vilified than the property tax. It has been called inherently regressive, inelastic, and an inadequate generator of municipal revenues. It has been labelled 'unfair' because unrelated to ability to pay, 'unrealistic' because unrelated to benefits, and 'unsuitable' because it supports services unrelated to property. Its effects on housing, land use, and urban development have been castigated; the determination of its base has always been controversial because value, unlike income or sales price, is a matter of opinion, not definition; and its political unpopularity has long been acknowledged by all.[1]

In response to views such as this, in the last fifteen years over two dozen official studies in Canada have condemned the property tax in both theory and practice, particularly because of its alleged regressivity. The usual procedure followed in these studies has simply been to *assume* that the property tax is 'regressive and inequitable in that it bears most heavily on those least able to pay' (Prince Edward Island, 1969, 99). A more restrained statement along these lines appears in one of the most recent (and longest!) of these reports, on Nova Scotia, which concluded, like most of its predecessors, 'that there is fairly substantial evidence to support the contention that the property tax on average is regressive at the lowest income levels.' (This report went on, however, unlike most such reports, to add that 'it is probably not seriously regressive for other than the lowest income groups, on average.' Nova Scotia, 1974, 23-180.)[2]

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[1] This catalogue of vices is drawn from Bureau of Municipal Research (1973) and Martin (1972).

In general, though few of these reports attempted to support their reasoning on the way in which the burden of the property tax is distributed by income classes (its 'incidence') by explicitly quantitative estimates of the sort discussed in chapter four below, they all agreed, without exception, that the tax was regressive and was thus not a good tax in terms of ability to pay.[3] In addition to the almost universal assumption that the incidence of the tax was regressive, this common negative appraisal also reflects the low esteem in which the administration of the property tax in Canada (particularly the assessment of the base) is held.

Despite the universally negative appraisal in the various official reports of the property tax as regressive and inequitable in both principle and practice, however, only one study drew the apparently logical conclusion that the tax was beyond redemption and should therefore be abolished and replaced by a system of provincial grants, service charges, and a municipal income tax.[4] All the other provincial and municipal tax studies, including the important Smith Report in Ontario (Ontario Committee, 1967), despite their avowed distaste for the property tax, found it to be too valuable as a source of local revenue for local purposes, and thus as a bulwark of local autonomy, to make such a drastic step advisable. The property tax has thus survived this storm of official abuse. Indeed, it has remained the most important single source of local revenues under local control throughout Canada and hence a crucial element in the governmental structure of this country. Its very persistence in the face of such criticism suggests that it must have some virtues, hidden though they might be.

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[2] This position is not far from that reached later in this study: see chapters three to five below. The Nova Scotia report, however, also argued that 'landlords shift at least a substantial proportion of the costs imposed by higher property taxes to their tenants in the form of higher rents. Most often landlords shift all, or more than all, of the cost' (Nova Scotia, 1974, 23-3). Indeed, the suggestion that landlords may pass on *more* than the cost of taxes even exceeds the more usual assumption in other reports 'that the landlord must incorporate in the rent, all, or a good part of the real property tax which he pays with respect to the leased premises' (Manitoba, 1964, 95). Although this assumption is occasionally weakened by the recognition that 'a slump in housing demand could prevent an owner from shifting the whole burden to the tenant' (Quebec, 1965, 266), in general the consensus of official Canadian wisdom is clearly that 'the tax, as a general rule, is shifted to the tenants, who pay it as part of their rent' (Montreal, 1963, 16). This line of reasoning receives much less support in the present study.

[3] Occasionally, however, some sympathy for the property tax as a benefit tax was expressed, e.g., New Brunswick (1973, 30); see also chapter two below.

[4] Newfoundland (1972). In this connection, it should be noted that the property tax is less important as a source of local revenue in Newfoundland than in any other province: see Tri-Level Task Force (1976). There is indeed a strong case for more municipal use of service charges (Bird, 1976d, part II), but this point cannot be further developed here.

Influenced by the prevailing negative attitude toward the tax, however, all provincial governments have in recent years taken measures to alleviate what are generally considered to be its major defects, particularly its regressivity. These measures have taken three principal forms: first, relieving pressure on the tax by provincial assumption of local functions and increased provincial transfers to municipalities; second, removing the apparent regressivity of the tax through such devices as split mill rates, exemptions, and property tax credits; and, third, rectifying some of its administrative deficiencies through such measures as provincial take-over of all or part of the assessment function, assessment at full market value, and more frequent reassessment.[5] Several provinces other than Ontario, notably New Brunswick, Prince Edward Island, and, most recently, Nova Scotia, have taken considerable steps in all these directions, and all provinces have taken at least some such action.

In short, what has gone on in Ontario over the last decade differs from what has gone on elsewhere in the country only in degree rather than kind. The views on the regressive incidence of the property tax, and on the need to alleviate it, found in Ontario are shared throughout the country, as are the recommended solutions. The only noticeable difference is that Ontario, as befits its size and wealth, has done more than most to alter the property tax institution in response to these views. It has not, however, as yet done much more in the way of studying either the (presumed) evil - the tax - or the (presumed) solutions - such as the property tax credit and the property tax stabilization program. The present study aims in part to rectify this neglect.

A READER'S GUIDE

The remainder of this chapter discusses the revenue importance of the Ontario property tax and its evolution over the decade since the Smith Report of 1967. Against this factual background, chapter two then considers some more nebulous but no less important aspects of the property tax system in Ontario, with particular emphasis on the greatly increased provincial role in property taxation and the persistent discrimination in favour of residential property. Chapter two also suggests that, while the precise nature of the interplay between 'objective' reality and the subjective perceptions of that reality upon which people act is by no means clear, there is at least some evidence that much of the discussion of the property tax by professional economists has not in the past grappled with what appear to be the 'real' issues in policy terms.

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[5] Such administrative reforms may of course have a rationale quite apart from the desire to rectify the perceived regressivity of the conventional property tax system, but there is little doubt that this desire has played at least some part in their adoption.

The following three chapters (three to five) discuss in considerable detail the tangled question of the incidence of the property tax, particularly the residential property tax. Those readers who are interested only in the Ontario case may want to read only the last sections of each of these chapters, where the general arguments on the theory and the evidence are summed up with special reference to Ontario. Although these (and other) readers may find the detailed presentation, and dissection, of the theories and the 'empirical' work on property tax incidence contained in these three chapters as a whole somewhat overwhelming, this material is essential to the general argument of this book. Unless the reader becomes as convinced as we are of the pervasive uncertainty afflicting all statements on property tax incidence, he will not really be able to accept the subsequent arguments on the property tax relief programs. The slow canter through the forests of incidence theory and quantitative incidence estimates in chapters three to five is thus intended, so to speak, as a 'brainwashing' exercise, washing away the residue of old theories and unexamined assumptions that cling to our perceptions of most issues. Thankfully, however, the generally pessimistic assessment of the state of the incidence art in these chapters is relieved at the end of chapter five, wherein we assure the reader that he really does not need to know most of what incidence studies purport to tell him anyway and that what he *does* need to know for most practical purposes about tax incidence is well within our grasp in principle, if not yet in practice.

Finally, in chapter six we come to one of the principal concerns of this study, the Ontario property tax credit. Harking back to the introductory discussion in chapter one, chapter six first places the credit in its historical context and then discusses in some detail its objectives and design, comparing it to the similar (but not identical) programs found in other provinces and in the United States. Against this background, chapter seven then appraises the credit at various levels, considering first some technical problems and then the more difficult questions of its impact and incidence. In general, the conclusions of each of these lines of inquiry are not particularly favourable to the credit, whether one views it as a means of 'relieving' property taxes or in some other way.

Chapter eight similarly deals with the property tax stabilization program. The first part of this chapter outlines the features of this program as it existed in 1973 and 1974 and places it in the context of the evolving provincial-municipal grant system. Following a brief exposition of the virtues and limitations of econometric studies of local reactions to intergovernmental fiscal transfers, we then report on such a study of the impact on local budgets of unconditional grants (including the property tax stabilization grants). This study suggests that the result of these grants may indeed have been to lower property taxes. It does not follow from this result, however, that the stabilization program was therefore a success. Indeed, the concluding chapter of the study, chapter nine, goes on to suggest that, while the credit and the grant program each have their particular virtues and vices, in neither case does our appraisal of these programs have much to do with the extent to which they 'relieve' citizens from paying property taxes. Nor should it do so; for most citizens do not, in fact, 'need' such relief from what is, in the final analysis, not such a bad tax at all.

To sum up, then, readers interested specifically in Ontario should probably read chapters one and two, skim the concluding sections of chapters three to five, and read chapters six to nine, perhaps skipping the sections on credits in other jurisdictions in chapter six and on modelling local fiscal reactions in chapter eight. On the other hand, readers with little interest in the specifics of the Ontario situation but a general interest in property taxes will probably get most out of this study by more or less reversing the process, that is, by skimming chapters one and two (with more attention to the latter), going through chapters three to five more carefully (perhaps skipping the incidence estimates for Ontario in chapter four), skimming chapter six, and going through chapters seven to nine with a little more care. Finally, those interested in the analysis of public finance measures in Canada in general should probably read the whole book.

REVENUE ASPECTS

As seen in Table 1, property taxes accounted for only 35 per cent of the gross revenue of local governments in Ontario in 1974, down from 43 per cent in 1969 and much higher percentages in earlier years. Municipal property taxes, which accounted for 56 per cent of total property taxes in 1974, financed only 33 per cent of gross local expenditure in that year, while school property taxes financed only 36 per cent of educational expenditures, compared to 40 per cent and 48 per cent respectively in 1969 (Feldman, 1976). Similar trends were observed in all provinces in this period, reflecting the fact that the property tax has in recent years grown more slowly than any other major revenue source, with municipal expenditures being increasingly financed through provincial grants (Gillespie, 1974). Yet the property tax remains, after the personal income tax, the second most important revenue source in Ontario, and it has continued to provide close to three-quarters of municipal own-source revenues (that is, exclusive of grants). The relative importance of the property tax as a source of revenue is declining, but its importance in absolute terms thus remains high.

Table 2 provides additional perspective on the relative growth of the property

TABLE 1

Revenue importance of the property tax in Ontario, 1969-74 (millions of dollars)

Year	Property tax revenues			As per cent of		Per
	Municipal	School	Total	Own revenues (%)	Total revenues (%)	capita ($)
1969	517.8	750.4	1268.2	75.5	43.1	171
1970	588.2	799.2	1387.4	75.5	41.5	183
1971	676.3	785.4	1461.7	75.7	39.2	189
1972	763.4	788.0	1551.4	74.2	37.6	198
1973	877.2	664.8	1542.0	74.3	35.8	194
1974	942.7	727.7	1670.4	74.6	35.0	206

SOURCE: Tri-Level Task Force on Public Finance (1976)

tax.[6] From 1969 to 1974 taxable assessed valuation fell slightly in relation to gross provincial product (GPP), although even after allowing for changes in price level and in population there was a 10 per cent increase in assessed valuation per capita in constant 1974 dollars.[7] The yield of the property tax in real terms fell over this period, however, owing largely to a substantial decline in the taxes levied as a percentage of taxable assessed valuation.[8] While property tax revenues in absolute terms rose 38 per cent from 1969 to 1974, and property tax revenues per capita similarly rose 26 per cent, both measures fell sharply in relation to both GPP and assessed valuation. When the substantial price level changes over this period are also taken into account, the per capita yield of the property tax in real terms also *fell* from 1969 to 1974, as did property taxes on residential and farm properties - the most visible component of the property tax to most

[6] The data in Table 1 are not directly comparable to those in Table 2 owing to differences in sources and definitions.

[7] Taxable assessed valuations constitute the actual tax base but are not, of course, very representative of the actual market value of taxed properties. For some years, Ontario has also produced data on what are called 'equalized assessments,' largely as a basis for apportioning grants and costs among municipalities. Although closer to market values than assessed values, these 'equalized' figures also substantially understate real market values for various reasons (especially because they are only at 1970 levels). In 1974, for example, total equalized assessments came to $74.1 billion (compared to $27.2 billion in taxable assessments) but the actual market value of realty in the province was probably closer to $150 billion; see Ministry of Treasury (1975, xv, 6).

[8] The tax figures in Table 2 are deflated by the implicit deflator for government current expenditures in order to give some indication of what local governments could buy with the revenues they received. Because the prices of the goods and services purchased by government rose more quickly over this period than the price level in the economy as a whole (as measured by the implicit deflator for gross national expenditure) this procedure naturally accentuates the relative decline of the property tax.

TABLE 2

Relative changes in assessed values and property taxes, 1969-74

	Current $		Percentage	Constant 1974$		Percentage
	1969	1974	change	1969	1974	change
Assessed valuation ($ millions)	16,319.5	27,169.0	66	22,520.9	27,169.0	21
As per cent of GPP	50.0	47.4	–5	50.0	47.4	–5
Per capita ($)	2210	3357	52	3050	3357	10
Property taxes ($ millions)	1438.3	1982.2	38	2085.5	1982.2	–5
As per cent of GPP	4.4	3.5	–20	4.6	3.5	–24
As per cent of assessed valuation	8.8	7.3	–17	9.3	7.3	–22
Per capita ($)	195	245	26	282	245	–13
Residential and farm taxes per capita ($)	113	139	23	164	139	–15

SOURCES: Ministry of Treasury (1976a) – population, GPP; Statistics Canada (1976) – deflators; Ministry of Treasury (1975) – assessed valuation and taxes.

NOTES: Assessed valuation figures are total taxable valuations. Property taxes include special charges and business taxes but exclude payments in lieu of taxes. Gross provincial product at market prices and assessed valuations are deflated by the national accounts implicit GNE deflator. The 1974 GPP figure is provisional. Tax figures are deflated by the national accounts implicit GNE index for government current expenditure on goods and services.

taxpayers. Although residential and farm taxes did of course increase substantially from 1969 to 1974 in current dollars, as did everything else, they fell in proportion to both assessed valuation and GPP. A 35 per cent increase in residential and farm taxes in total thus amounted to 23 per cent in per capita terms, to −7 per cent in constant dollar terms and to −15 per cent in per capita constant dollars.[9] Furthermore, since personal income rose sharply during this period, residential property taxes per household as a proportion of personal income also fell substantially from 4.0 per cent in 1970 to 2.8 per cent in 1975 (Ontario Budget, 1976, 60).

These figures thus appear to support the constant complaints heard from municipalities about the inelasticity of the property tax and its inadequacy as a source of finance for expanding local services, although the potency of this argument is weakened considerably by the striking *decline* in effective tax rates over this period.[10] The data lend no support at all, however, to the even more constant complaints from taxpayers about the increasingly crushing burden of the municipal property tax. There has simply not been any such increase, at least on the average, in Ontario over these years.[11] Expanding municipal service costs have been financed not by increased property taxes but by greatly expanded provincial grants - financed, of course, through other taxes, especially income and sales taxes.

The popularly accepted image of the increasingly heavy burden of the property tax in Ontario - while it is obviously appealing to those now paying, say, five times more taxes (in money terms) on their house than they did the day they bought it - thus has no basis in economic reality. The roots of 'the property tax crisis,' if such there is, therefore must lie more in non-economic than economic factors, and in particular in the very visibility and local nature of the tax which are assumed by many economists to be among its greatest virtues. This point is developed further in chapter two below.

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[9] Calculated from data in Ministry of Treasury (1975), using the same procedures as in Table 2. Unfortunately, available data do not permit the separation of residential and farm property tax data: one published official estimate for an unspecified year is that 36.0 per cent of property tax revenues came from business property, 38.5 per cent from owner-occupied residences, 16.5 per cent from rental housing, and 9.0 per cent from farm property (Assessment Education Branch, 1971, 24). 'Residential and farm taxes' also include taxes levied on vacant land and buildings and non-commercial institutions. Recently, the 'non-residential' component of this figure has been estimated at 5 per cent in urban areas and 10 per cent or more in rural areas (Ministry of Treasury, 1975, xvi). See also the discussion in chapter four and appendix C below.

[10] As shown in Table 2, property taxes fell from 8.8 per cent to 7.3 per cent of assessed valuation from 1969 to 1974. As a percentage of *equalized* valuation, however, the average tax rate actually *rose* slightly from 2.6 per cent to 2.7 per cent (calculated from Ministry of Treasury, 1975). The 1974 rate in relation to true market value, however, was probably close to 1.4 per cent (see n. 7 above) and was almost certainly substantially lower than the effective tax rate in 1969. One reason why the equalized figures give such a misleading impression in this case is, as noted above, simply that they are intended to depict *1970* market values and hence omit the substantial rise in property values which took place in Ontario in the early 1970s.

[11] The recent Blair Commission report reaches a similar conclusion (Commission on the Reform of Property Taxation in Ontario, 1977, 6-7).

DEVELOPMENTS SINCE 1967

Although the property tax in Ontario in 1976 still retains many characteristics acquired over its long history - it was introduced in 1793 - in some important respects the tax has undergone a profound transformation since the report of the Ontario Committee on Taxation (Smith Committee) in 1967 condemned the property tax as regressive and inequitably administered. The Committee recommended, among other things, (1) that real property be assessed at 'actual' value, (2) that reassessment be frequent, (3) that the province play an increased role in assessing real property, (4) that increased provincial grants be used to reduce the weight of the real property tax, and (5) that the regressivity of the tax be alleviated by introducing a 'basic shelter exemption grant' for self-contained dwelling units. Unlike the fate suffered by most such reports, many of these recommendations have since been implemented in one way or another.

In 1968, for example, the basic shelter tax exemption was adopted in the Residential Property Tax Reduction Act with only minor modifications. In 1972, this provision was replaced by a more generous credit against personal income tax for part of property taxes (presumed) paid. Subsequently, an additional credit for pensioners was introduced in 1973, and the basic credit formula itself was made substantially more generous in 1974. These provisions for relief to individual taxpayers are discussed further in chapter six below.

Similarly, the province took steps to relieve financial pressures on municipalities by absorbing some functions (for example, the administration of justice in 1968) and, especially, by increasing unconditional grants in 1972 and again in each of the next three years. Some aspects of these provisions for relief to municipalities are discussed further in chapter eight below.

Another important development over the last few years has been the formation of regional governments in most urbanizing areas of the province.[12] Property taxes in Ontario are levied and collected *only* by lower-tier municipalities, with upper-tier municipalities - notably Metro Toronto and the new regional governments created since 1969 - as well as the school boards (also reorganized substantially, though on a different basis, in 1970) levying for their needs on the lower-tier municipalities. While these regional and school levies are separately identified on the tax bill, taxpayer pressure is therefore naturally most significant at the local level. At the other extreme, however, the provincial take-over of assessment and the increased provincial identification with the property tax through the property tax credits and the continued discussion of the question at the provincial level has undoubtedly increased popular perception of the provincial influence on property taxes. In effect, then, *four* levels of government - the province, the region (or county), the school board, and the local municipality - are involved in the determination of property taxes, but it is the first and last of these which are the most visible actors in the taxing process, though not necessarily the most responsible for its outcome.[13]

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[12] Although the pattern followed has deviated in some significant respects from the model set out by the Ontario Committee on Taxation (1967, chap. 23), this move too is to at least some extent attributable to the impetus given by this unusually significant report. Metro Toronto, of course, had a quite unique history, having existed since 1954 (Kaplan, 1967).

A particularly important change since 1967 has been the complete take-over of the function of assessing real property - a move which went beyond the Smith Committee's recommendations in this area - and the associated commitment to adopt full market-value assessment throughout the province. After several postponements, the province has recently announced that it will not employ these new values as the basis for municipal property taxes in 1978. As developed in the next section, it is difficult to overstate the significance of this change, if and when it takes place.

---

[13] A particularly hotly debated question concerns the impact of the new regional governments on local tax bills. A recent official study attempts to absolve regional governments from responsibility for increasing municipal taxes, finding all spending increases - apart from overly high salaries for senior administrators - quite explainable in terms of inflation and increases in the volume and level of service (Ministry of Treasury, 1976d). This conclusion may well be correct, but the inference that regional governments (and the province) could therefore exert no control over spending due to these factors is completely unsupported - as is the possible alternative inference that volume and level increases reflect simply 'demand' factors to which suppliers must passively adapt. (For a critique of this sort of reasoning, see Bird, 1970b, chap. 7.) The only recognition in this report of any possible autonomous role for local officials and politicians in this expansionary process is the statement that regionalization leads to equalization at the highest level (pp. 19-20) - though even this seems to be viewed as an inevitable fact of life since it is lumped in with the general effects of inflation. For a much more penetrating analysis of the effects of governmental consolidation and amalgamation, in Toronto, see Cook (1974).

ASSESSMENT SYSTEM

Any analysis of the property tax must obviously take into account how the tax is actually administered.[14] Unfortunately, there are few published data in Canada on variations by type of property in the relation between assessed values and market values (the assessment-sales ratio). The most thorough study of this question still appears to be that in the Smith Report on data for 22 Ontario municipalities (including Metro Toronto) in 1961-3 (Ontario Committee, 1967, vol. 2, 246-61). This study found: (1) wide variations in the assessment-sales ratio within particular municipalities, (2) significant variations among municipalities, (3) generally higher ratios for apartments, and (4) generally lower ratios on land than on buildings. In short, there was considerable evidence of discrimination in prevailing assessing practice against apartments and in favour of single-family residences, as well as substantial undervaluation of land in all classes of property. Although long suspected, these aspects of the assessment system had not previously been documented in detail since Ontario, unlike many US jurisdictions (but like most other provinces), does not publish the results of any assessment-sales ratio studies which may (or may not) be carried out.[15] An earlier study by Clayton (1966) had also suggested a possible tendency to over-assess lower-valued homes relative to higher-valued homes.

The most detailed published study of assessment patterns since the Smith report was carried out in what is now the Region of Peel in 1970 when a new assessment was carried out in the then Town of Mississauga. This study found that market-value assessment resulted in a marked shift of the tax base to residential properties. Within the residential sector, single-family houses, especially older houses with substantial land, were found to be especially undervalued (Bureau of Municipal Research, 1970). Land values in this area had of course grown sharply in the 1960s (and have continued to do so since). This Mississauga study has been cited several times since by official sources (such as Assessment Standards Branch, 1974, 54) as representing the probable effect of the province-wide move to the new assessment system.

Most recently, the first official study of the effects of the move to market value assessment, in the Region of Niagara, similarly suggested that the result with an unchanged tax system would be an increase of 7 per cent in taxes on residences, an increase of 46 per cent in taxes on farms, and a decrease of 20 per cent in taxes on commercial and industrial properties (Ministry of Treasury, 1976b, 14). Taxes on vacant land, golf courses, and so on would, it was estimated, increase by over 56 per cent, presumably, as in the case of farms, reflecting primarily the substantial previous understatement of land values. Another recent official study shows that single-family residences in Toronto were, on average, assessed at only 9 per cent of market value while properties containing more than six residential units were, on average, assessed at 22 per cent of market value (Commission on the Reform of Property Taxation, 1977, 24).

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[14] Canadian assessing practices are described in detail in Finnis (1970, 1972); further material on the Ontario system may be found in MacKay (1968). An excellent detailed introduction to property valuation for the layman is Oldman and Schoettle (1974, 139-98).

[15] For critical comments on Canadian practice in this respect, see Clayton (1976).

The scanty available evidence thus suggests that in addition to explicit rate discrimination in favour of residential property (see chapter two), Ontario assessing practice has long implicitly discriminated in the same way. Based on the studies cited above, as well as the copious evidence on similar patterns in the US[16], the pattern of discrimination that still prevails may be sketched along the following lines. First, residential property is under-assessed relative to commercial and industrial realty. Second, apartment buildings are over-assessed relative to single-family houses. Third, land values are under-assessed everywhere. Fourth, newer buildings are over-assessed relative to older ones. Fifth, low-value rented residential units (whether apartments or not) are probably over-assessed relative to high-value units.[17]

To illustrate this pattern of assessment discrimination, compare two buildings of equal market value in Metropolitan Toronto located in, say, the City of Toronto and the Borough of Scarborough respectively: the latter is probably taxed more heavily (assuming the nominal tax rates and the levels of service received are the same) because it is almost certainly newer. If the city structure is rented, however, and the Scarborough one is owner-occupied - also a likely situation - one assessment bias may be offset by another and the result is unclear. New low-rent structures in Toronto, if such existed, would of course be doubly adversely affected by these assessment practices. If one assumes, however, that low-income people in the suburbs tend to live in owner-occupied houses and in the centre in rental properties, as may be true, the various assessment biases may tend to be offsetting in terms of their effects on the incidence of the property tax by income classes.

More generally, all residents of single-family houses, and particularly those in older houses with larger land areas, have probably long been favoured by assessing practice in Ontario, as in most jurisdictions. Any such persistent pattern of discriminatory assessments must grow out of and be maintained by political

[16] See, for example, Oldman and Aaron (1965) and Paul (1975).

[17] No published evidence for Ontario supports this last proposition, but it seems probable based on US experience (in addition to the references cited in n. 16, see Peterson, 1972) and on the similarity of assessing practices in various jurisdictions. The importance of this point is discussed further in chapter five below.

pressures and the operation of the political process. This proposition is particularly easy to sustain in Ontario because of the history of the split mill rate and the current proposals for revising the tax system before introducing market-value assessment; both these points are discussed further below.

One other important characteristic of the Ontario assessment system deserves special note, namely, its hermetic secrecy. Such experienced observers as Bureau of Municipal Research (1970) and Clayton (1976) have commented, quite correctly, on the difficulties to which this secrecy gives rise for ordinary homeowners contemplating an appeal against the valuation of their property. Even after a 1968 court decision forced a revision of the Assessment Act to give property owners the right to discover the factors used in valuing *their* property (Chernos, 1969), there is still no way they can determine how *other* properties have been valued. Only those with the resources to conduct their own comparative appraisal studies have much chance of arguing successfully with the assessor unless he has gotten some obvious physical facts wrong. The secrecy of assessment procedures thus tends to make the appeals procedure to some extent the recourse of the rich, which in turn suggests that the net effect of appeals may be to make the impact of the property tax more regressive than it would otherwise be.

More importantly, the perceived and actual difficulty of the formal appeal procedure for ordinary taxpayers is probably one factor leading to considerable use of other, more informal means of 'tax protesting' through publicity and political contacts both at the local and, especially in recent years, the provincial level. These protests may be generated in the first place in response to perceived inequities and administrative arbitrariness affecting an individual, but in the absence of information on the relative fairness with which he is being treated, they are likely to take the form of general complaints about the whole institution of property taxation.[18] In other words, assessors probably bring some of their troubles upon themselves by the unduly insensitive way in which they conduct their affairs – a situation which is exacerbated by any fractional assessment system, whether the 'informal' one existing up to now or the formal one which the provincial government now apparently proposes to introduce.

[18] Economists tend usually to underplay the importance and effectiveness of this use of 'voice' to protest public policies and, conversely, to over-emphasize the importance of 'exit,' that is, of dissatisfied taxpayers exercising their right to move out of the offending taxing jurisdiction. (The 'voice'-'exit' terminology comes from Hirschman, 1970). While it may be true that *potential* residents in some sense consider relative 'tax-prices' before deciding whether or not to move in, it is not very likely that changes in these 'tax-prices' will have much effect on the location decisions of *existing* residents. Few economic factors are more 'locked in' than the family man with a steady job – the usual homeowner in this country. His only form of protest in these circumstances is generally to complain, an activity with which those concerned with property taxation are very familiar.

THE 1976 REFORM PROPOSALS

The proposed introduction of market-value assessment is one of the most important changes in taxation in Ontario in recent years. In view of the unevenness of the existing system, a new uniform market-value system would, in effect, transfer enormous quantities of wealth from some sectors of the community to others (on the assumption that existing differentials in taxes are largely capitalized, as discussed in chapter three below). Whatever the administrative merits of the new system, any government faced with this sort of situation would be wise, if it really wanted to be able to implement the proposed reform, to recognize the inevitable transitional inequities and to cope with them in some way. Feldstein (1976) suggests that two means which may be employed for this purpose are *postponement* and *compensation*. Shoup (1970), in contrast, has suggested that the most common solution to such problems is through *compromise* of one sort or another. The Government of Ontario has in practice followed both the path of postponing on several occasions the time at which the changes in the assessment system are to take effect and, most recently, the path of compromise in the form of a set of proposals in the 1976 budget as to how the tax system might be altered before the market value system is finally introduced. These proposals, and the recent comments on them by the Commission on the Reform of Property Taxation in Ontario (Blair Commission), are discussed briefly in this section.

The most important single proposal so far as the present study is concerned is undoubtedly the proposal to replace the present split mill rate by, in effect, a classified real property tax. Since 1957 Ontario has had a split mill rate favouring residential property. Since 1975 this rate differential has been standardized throughout the province at 15 per cent for general municipal tax purposes and 10 per cent for school tax purposes. That is, the rate levied on commercial and industrial assessment must be 15 per cent (or 10 per cent for school taxes), above that on residential and farm assessment. This differential was introduced originally on the grounds that owners of commercial and industrial properties could deduct municipal taxes for income tax purposes, while homeowners could not.[19]

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[19] This rationale was explicitly stated by the Minister of Municipal Affairs in the debates (Legislature of Ontario, *Debates*, 6 March 1957, 822) and by the Lieutenant-Governor in the Speech from the Throne (*ibid.*, 5 April 1957, 2008). It is reiterated, and apparently given great weight, in the recent report of the Commission on the Reform of Property Taxation (1977, 22). The current discriminatory provisions are contained in the Education Act (1974), s. 215, and the Ontario Unconditional Grants Act (1975), s. 7 (3). Despite their general confusion on the deductibility issue, the Blair Commission appears to have been the first official body to have commented on a peculiar assumption im-

This split mill rate system was criticized by the Smith Committee as resulting in relatively greater provincial assistance to residential taxpayers in those municipalities with a relatively high ratio of commercial assessment (and by others as inequitable because the resulting higher commercial taxes were shifted to consumers anyway; Martin, 1972). The Committee therefore recommended the abolition of the rate differential, although they favoured taxing only 70 per cent of residential assessment, thus retaining the basic discriminatory system. The most recent provincial proposals, following the standardization of the rate differential in 1975, in effect *increase* the explicit discrimination in favour of residences, thus generally more than offsetting the effects which market-value assessment would otherwise have in increasing taxes on residential taxpayers.[20] As proposed by the

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plicit in this reasoning as heretofore applied in Ontario, namely, that farmers cannot deduct property taxes for income tax purposes (Commission on the Reform of Property Taxation, 1977, 44-5).

At present, property taxes are deductible for income tax purposes only to the extent they are related to property which produces taxable income. Unless the imputed income from owner-occupied housing is included in the income tax base, this rule should remain unchanged. It has sometimes been suggested that because owners of rental property can deduct from taxable income the property tax which they pay, whereas homeowners cannot, landlords (and consequently tenants) are therefore favoured under the present combined income and property tax systems (Clayton, 1968). As noted above, a similar argument provided the original rationale for the explicit rate discrimination in Ontario in favour of residential properties as against business properties. Although the lower tax rate is applied to both rental and owner-occupied residential properties, the prevalent assessment discrimination against the former noted earlier may in part have reflected the same sort of reasoning.

There are two huge problems with this line of argument, however (neither of which is noted by the Blair Commission). The first is the uncertain incidence of the property tax, as discussed in chapters three to five below, and the consequent weakness of *any* policy recommendations based on an assumed incidence pattern of this tax. The second is simply that, as noted above, it is *homeowners*, not tenants, who are favoured under the income tax to the extent that they possess equity in their house and hence receive untaxed economic income. Any 'balancing' discrimination under the property tax should thus be *against* owner-occupied residences, not in favour of them. The best solution to these problems would be to tax imputed income under the income tax, to allow the deduction of mortgage interest for income tax purposes, and to apply the property tax evenly to all residential properties. (Homeownership is also strongly favoured in Canada by two other income tax provisions – the exemption of principal residences from capital gains tax and the system of exempting certain savings channelled into the acquisition and improvement of residences (Ontario Economic Council, 1976). These tax provisions offer further strong evidence of the importance attached to homeownership in the Canadian political system noted in chapter two, but cannot be further discussed here.)

[20] In the Niagara region, for example, the proposed tax system would *decrease* taxes on residences by 24 per cent, compared to the 7 per cent *increase* which would otherwise result from the introduction of market value assessment (Ministry of Treasury, 1976b, 14).

Smith Committee, however, the recent proposals would apply the same *rate* to all properties and achieve the desired discrimination by taxing different proportions of assessed values for different classes of properties. Ontario is thus in effect proposing to introduce a classified property tax, with explicit assessment favouritism to residential taxpayers under a reformed market-value assessment system replacing the present explicit rate favouritism plus the present implicit assessment favouritism. These proposals were fully supported by the Blair Commission, with some minor amendments.[21]

Residences will, it is proposed, be taxed on (approximately) 50 per cent of market value and all other property will be taxed on 100 per cent of market value in place of the present system, in which the ratio of assessed to market value varies according to the type of property and its location. This proposal implies that residential property taxpayers as a group would actually pay a *smaller* portion of total taxes than they do currently, though a few may of course still face larger tax bills after reassessment.[22]

The existing split mill rate is to be replaced by this system on the grounds that assessment differentials offer 'greater tax policy flexibility and administrative simplicity' (Ministry of Treasury, 1976b, 6). This assertion seems at best dubious, however. A rate structure with fixed percentage differentials can in principle be varied as easily as a single-rate structure. More important, fractional

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21 The most important amendment was that the percentage of residential property assessment taxed should be reviewed every two years and adjusted as 'necessary' (Commission on the Reform of Property Taxation, 1977, 23). The Commission's reasoning on this point is rather difficult to follow. The members appear to attach great weight to the fact that market values of residences have risen more sharply than those of non-residential property in recent years since the rationale for their suggested review procedure appears to be that those relative rates of increase might change in the future, thus requiring (for some reason) an adjustment in the percentage. The only reason suggested why these relative rates of increase should be relevant at all is because they do not reflect any 'change in the causes underlying the local expenditure structure as between these two classes' (*ibid.*, 22). But this argument appears to ignore their own fierce denial that the property tax can have any *benefit* rationale as between properties or property classes within a municipality. (See also the discussion of the benefit argument in chapter two below.)

22 The types of property that could be classified as residential for property tax would, quite properly, be restricted under the proposed system, since at present vacant commercial land, golf courses, etc. are all considered 'residential' in assessment data: see n. 9 above. As one might expect, these proposals, despite their obvious merits, were hardly welcomed by the golfing fraternity ('Tax proposals would close golf courses, owners warn,' *Globe and Mail*, (Toronto), 27 Oct. 1976). The Blair Commission (1977, 33) recommended power be given to municipalities to grant some relief to certain recreational properties on a deferral basis, recoverable (with interest) on conversion of the property to other uses.

assessments and uniform rates are both less understandable *and* less visible than uniform assessments and differential rates. Although the actual operation of the split mill rate system in Ontario has been rather cumbersome in practice - the residential rate was (prior to standardization) reduced in proportion to provincial grants only after all property was assessed, expenditures determined, and the basic tax rate established - this feature is of course not essential to rate differentiation. Recourse to the fractional assessment route once again opens the Pandora's box of *intraclass* inequities - that is, differences in the ratio of assessed to market value for the same type of property - the removal of which constituted a principal rationale for market-value assessment in the first place. The danger of such inequities creeping back in seems especially grave in Ontario in view of the firm resistance of the assessment authorities to any unveiling of class assessment-sales ratios and variances. All in all, this aspect of the proposed property tax reform appears to call for careful and skeptical scrutiny, even by those who support the principle of discriminating in favour of residential properties. It is regrettable that the Commission on the Reform of Property Taxation in Ontario appears to have accepted the government's arguments on this point without serious discussion.

Farms, including farmland, farm buildings, and farm residences, are currently assessed under the Assessment Act on the basis of their value to persons whose principal occupation is farming, an amount which is generally much less than the normal market value of farms near urban centres.[23] In addition to this favouritism, the *entire* farm is at present subjected to the lower residential mill rate. Furthermore, through the Ontario Farm Tax Reduction and Managed Forest Tax Reduction Programs, owners receive a rebate from the provincial government of 50 per cent of the taxes paid on farm properties. Although a change in ownership has no effect on this arrangement, with a change in the use of farmland (or managed forest property) the Province is supposed to recover the tax rebate paid, plus interest (at 8 per cent), for up to 10 years prior to this change in use.[24]

Under the new proposals, one element of this favourable treatment would be reduced in that the value of the property would be divided so that farm resi-

23 Analogous practices are common in North America: see International Association of Assessing Officers (1969). The Ontario system was earlier reviewed in Committee on Farm Assessment (1969).

24 Similarly favourable treatment is extended to farm property under the Ontario succession duty (see Bird and Bucovetsky, 1976, 45). The combined effect of provisions such as these has undoubtedly been to *raise* the value of farm properties, particularly in urban fringe areas (because the favourable tax differentials are capitalized into higher prices), although it is far from clear that this result is in the public interest. (See also chapter three and appendix A on tax capitalization.)

dences would be taxed on 50 per cent of actual market value like other residences, while farmland, farm buildings, and managed forest land would be taxed on 100 per cent of market value. Any increases resulting from this change, however, would be more than offset by providing a tax rebate, similar to the existing one, to cover *100 per cent* of the non-residential portion of the tax. Actually, the deferral proposal, like similar schemes for old people (see chapter six) has proven to be quite unpopular and may well in the end be replaced by a straightforward lower tax on farms. The Blair Commission, although favouring the deferral approach for such properties as golf courses and private schools, suggested in the case of farmland that on conversion to a non-farming use a surcharge be levied to recapture the property taxes paid by the province during the previous 10 years.[25]

One way or another, however, the most likely outcome of the policy process is that farms will continue to bear extremely low property taxes relative to other property, particularly in urbanizing areas. One expected result of this policy will, of course, be the maintenance of the present relatively high values of farmland in Ontario.

In contrast to the 'now you see it, now you don't' nature of the proposals on both residential and farm property, the recommendation concerning business property is refreshingly straightforward. Businesses currently pay a 'business tax' in addition to the property tax. Although the business tax is seldom taken into account in popular discussions of the property tax, perhaps in part because the tax is (and will continue to be) levied on the occupant rather than the owner of the business property, this tax is based on property values and is thus clearly a property tax. The only fundamental change to be made in the business tax is to move to a uniform rate of 50 per cent of assessed value in place of the present system of different rates for different types of business, with rates ranging from 25 per cent of business assessment to 140 per cent of business assessment. Business property will thus in effect be taxed under the property and business taxes on 150 per cent of assessed value compared to 100 per cent (refundable, or 90 per cent, if the Blair Commission's suggestion is followed) for farms and 50 per cent for residences, including farm residences.

In the Niagara region, the official estimate is that business taxes will increase by 7 per cent under this system, compared to the 25 per cent decrease which would otherwise be expected. Because the property tax *per se* on commercial and industrial realty would still decrease, however, the net effect will still be a slight decline in total business taxes under the proposed system (Ministry of Treasury, 1976b). Whether this result will withstand the current pressures to alleviate the impact of the proposals on such classes of property as schools and other exempt private property is perhaps open to doubt, however, in view of the demonstrated propensity of Ontario governments in the past to levy higher taxes on business than on other groups. If, as seems likely, the exemption proposals are weakened,[26] any resulting revenue slack seems likely to be made up, not by higher taxes on residences or farms, but by higher taxes on business, even though it is very hard to think of any economic rationale for this procedure (see also chapter two). (On the evidence of other tax policies and recent discussions, however, some special favouritism may well be granted to 'small' businesses.)

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[25] Just how this system might work is not particularly clear: for example, for how many years would the surcharge apply? The Commission also proposed that farmers pay 10 per cent of the tax on farmlands and buildings, with the province paying 90 per cent. This recommendation is consistent with their proposed revision of the tax credit (see chapter seven).

Despite such caveats, on the whole, the 1976 budget proposals, in combination with the market-value reassessment now virtually completed throughout the province, would make the property tax base uniform throughout the province, increase the tax base available to municipalities, reduce the proportion of total taxes paid by residents, and provide a uniform business tax. The implementation of market-value assessment, even on a classified basis, would also provide a more uniform base than the current equalized assessment on which to determine grants and shared-cost programs.[27]

In terms of the present analysis, the proposed changes may in total perhaps best be described as being designed to improve the property tax while basically retaining its present classified nature. Apart from the principle of discrimination in favour of residences (and farms), the most questionable aspect of the proposals is probably the *manner* in which it is proposed to attain the desired degree of discrimination. It requires a great deal of trust in the provincial administration to believe that the adoption of a fractional assessment system like that proposed will not, over time, lead to growing intraclass inequities of the sort with which Ontario residents are already too familiar - if only, in the absence of publicly available assessment-sales ratio studies, through hearsay.

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[26] The premier has already indicated that private schools will not in fact, be taxed and hinted that other 'worthwhile' organizations may also escape (*Globe and Mail,* 30 Oct. 1976). These remarks were repeated by Mr McKeough, the Treasurer, in his 10 March 1977 statement on the release of the Blair Commission report. The Commission itself provided an escape hatch for private schools and a municipal option procedure for retaining other 'worthy' exemptions.

[27] See n. 7 above. It is clear from both the provincial proposals (Ministry of Treasury, 1976c) and the report of the Blair Commission that the effects of these assessment changes on grants are of very great concern both to the province and the municipalities.

In combination with the recent reduction in the rate of growth of provincial grants, the current intention to return assessment rolls every two years to coincide with municipal elections, and the provincial commitment to use property tax credits, if necessary, to lighten the inevitable cost to some residents of shifting to the new system, these recent reform proposals perhaps permit the safe inference that the property tax will continue to be an important source of revenue to local governments and that the mixture of provincial and municipal responsibility for the tax which has developed in the last few years will basically continue in the future.

2

The property tax system

The brief sketch in chapter one of the past, present, and probable future of the property tax in Ontario brought out several significant characteristics of this important fiscal institution. In particular, the importance of considering the property tax as part of the entire provincial-municipal system and the highly political nature of policy decisions on property tax structure and administration, even those which appear superficially to be as innocuous as the introduction of improved assessment practices, emerged clearly from this discussion. These characteristics are sufficiently important, and interrelated, to warrant reference to 'the property tax *system*' rather than simply 'the property tax.'[1]

This long-entrenched fiscal institution does indeed constitute a system in the political sense of a set of rules, formal and informal, relating the inputs derived from various constituencies to the outputs received (and perceived) by those same constituencies.[2] In addition to its importance in its own right, the property tax system also constitutes an important subsystem underpinning the entire local government system of Ontario. Although this last point is necessarily neglected for the most part in the present study, several other points noted earlier - (1) the provincialization of the property tax, (2) the persistence of discriminatory classification of properties, and (3) the interaction between perception and reality - are developed further in the present chapter.

[1] This discussion was inspired, in context if not in detail, by the work of Fisher (1969, 1976) and Fisher and Fairbanks (1967).

[2] The 'systems' approach in political analysis is especially associated with the work of Easton (1965), but the present discussion has been more directly influenced by Ilchman and Uphoff (1969).

THE PROVINCIALIZATION OF THE PROPERTY TAX

Although the issue of centralization in government activity in Canada has long been discussed with respect to the federal and provincial governments, the precise extent of that centralization is still in dispute.[3] In contrast, the increasing centralization of governmental authority *within* the provinces has been much less discussed. in part perhaps because its extent is much less open to dispute. Throughout Canada there is in both law and fact very little local autonomy. The provinces have sole authority to establish and define the powers and responsibilities of local governments, and to approve their revenue sources, and as a rule they actively exercise this authority.[4]

Ontario is no exception to this general description. As one commentator has written: 'The fundamental principle upon which all local government in Ontario proceeds is that municipal corporations are not autonomous bodies. They are limited in the exercise of their powers and in the discharge of their duties by the terms of the statutory enactments which are the foundation upon which rests the whole of their authority' (Ross, 1962, 22). Although true in principle since the foundation of local government in the province, the validity of this dictum in practice was greatly strengthened in 1935 with the creation of the Department of Municipal Affairs to supervise and control municipal finances, largely as a conquence of the severe problems encountered by many municipalities in the 1930s. Since that time there has been little evidence that the province has changed the low opinion of the capability of municipal governments which was apparently crystallized by the experience of the depression – or, perhaps, its simple dislike of yielding any power to the more capable among them.[5] In addition to the influence exerted over municipal finances through direct provincial funding and provincial control over revenue sources and the allocation of expenditure responsibilities, for example, all capital expenditures by municipalities must be individually approved by the provincially-appointed Ontario Municipal Board, which exerts detailed control as well over municipal borrowing.

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[3] Contrast Bird (1970b, chap. 9) to Oates (1972, chap. 6).

[4] See Rowat (1969) in general and, for a recent brief comparative survey, Department of Housing and Urban Development (1974).

[5] Although the Commission on the Reform of Property Taxation in Ontario (1977) was termed 'insulting' by various municipal officials (*Globe and Mail*, 11 March 1977) because it suggested that the province should carefully monitor municipal spending to make sure that property tax reform was not used as a guise for increasing spending, the Commission's attitude simply reflects this long common concern among provincial officials and, indeed, in segments of public opinion (see, for example, the *Globe and Mail* editorial to this effect on 12 March 1977).

The province thus exerts tight control over municipal budgets both in general and in detail. In recent years, despite occasional political rhetoric to the contrary, provincial spokesmen have continued in practice to make it very clear that municipal corporations are in no sense autonomous bodies in either law or fact. With respect to the property tax, for instance, the amount which has to be raised through this means by any municipality is determined largely by (1) the expenditure responsibilities with which it has been charged, often in considerable detail, by the province, and (2) the amount of assistance it receives from the province in discharging these responsibilities. These broad constraints on the lower-tier municipalities which are directly responsible for levying and collecting property taxes are considerably exacerbated by their responsibility for implementing the taxes required as a result of decisions of the provincially-created upper-tier governments and school boards. The need to meet the revenue demands of these agencies, which are in no direct sense under the control of the local governments which must finance them, clearly restricts the freedom of municipalities to finance their own expenditures through increased property taxation. The allocation of expenditure responsibilities, the amount and allocation of provincial grants, and the basic design of sub-provincial governmental structures, are all basic determinants of local property taxes - and are almost entirely out of the hands of those directly responsible, both in a legal and a political sense, for levying those taxes.

Although accentuated in recent years by the increased importance of provincial grants and by the striking restructuring of local governments which has taken place in Ontario, this basic dependence of local property tax rates on provincial policy has not been fundamentally altered. What *has* been changed has been the degree of provincial control, at least potentially, over the tax *base*, largely as a result of the provincial take-over of the assessment function and the increased degree of explicit provincial regulation of discrimination by classes of property. These measures have, in effect, greatly increased direct *provincial* responsibility for the exact property taxes which are, in the end, levied on particular properties in particular localities.

Even more important in some ways has been the increased provincial *acceptance* of this responsibility - witness the property tax credit and the property tax stabilization grant - and the concomitant increased awareness by the public of the provincial role in the determination of the property taxes that they pay. The property tax continues to play a vital role in the Ontario local government system, but the changes over the last decade both in the tax itself and in local government structures generally have brought about greater awareness on all sides of the dominant role of *provincial* policy in determining *local* tax changes.

Ontario municipalities are thus truly the creatures of the province, and their taxes are therefore in a real sense provincial taxes. Although the provincial government has shown some signs in the last year or so of trying to pull back from its acceptance of responsibility in this area, it has probably already gone too far to be able to play with impunity that favourite Canadian political game of shifting the blame for taxes on others while accepting credit for expenditures.[6] The Federal government may eventually be able to make the provinces bear the political cost of raising the revenue that finances many of the expenditures for which they eagerly claim credit, but it is less likely that the provincial governments will be able to do the same with respect to the municipalities, simply because the actions of the latter as a rule too obviously just embody provincial policy in another guise.[7]

DISCRIMINATION IN FAVOUR OF RESIDENTIAL PROPERTY

A particularly striking instance of provincial control over the property tax is afforded by the recent proposal to introduce a classified property tax in order to obviate the effects that market-value assessment at a uniform tax rate would otherwise have on the distribution of property tax payments.[8] In addition to the split mill rate (and the business tax), the previous property tax system in fact embodied a significant degree of discrimination via assessment practice, mostly in favour of single-family homes, as noted in chapter one. Experience over the last few years in Ontario appears to have made it plain that some degree of discrimination in favour of residences is in fact an *essential* part of the property tax system, and that it is now the job of the provincial government to maintain formally what was previously largely done in a *de facto* manner by local officials.

A recent US study of the politics of property taxation suggested that municipal governments in large American cities were particularly sensitive to the taxes levied on homeowners both because of their desire to retain the middle class in the central city and because of the great sensitivity of this group to taxes, and

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6 For a cogent analysis of this 'game' in the federal-provincial context, see Hartle (1968).

7 This is not to deny that a larger *local* role in determining local taxes and expenditures is desirable in principle. For an extended argument that there is in most countries, including Canada, a very strong case for devolving sufficient real authority, including fiscal authority, to local governments organized with sufficient territorial and functional competence to enable them to do the job, simply because in the end they *must* do the job anyway, whether as 'independent' governments or 'field offices,' however hampered they may be by inadequate staff and resources and inappropriate interventions from above, see Bird (1976e).

8 The effects on property tax *incidence* are a very different, and much more difficult question, as developed in detail in later chapters.

especially to property taxes (Paul, 1975, chap. 3). Not only are property taxes often much more visible to taxpayers than income or sales taxes, but the size of the tax affects the value of their homes, for most families their largest single investment and the repository of their life's savings.[9] Ontario municipalities do not as yet seem very exercised about the prospect of losing their middle-class residents, but they are clearly concerned with the obvious political sensitivity to property tax increases, as, indeed, is the provincial government.

The argument that the lump-sum nature of property tax payments adds to their visibility and hence their unpopularity - compared to, for example, income taxes withheld weekly or monthly - is probably often overdone, because in fact many people pay the property tax on a monthly basis with their mortgage payments. As Finnis (1972, 17) has noted, however, it is perhaps not politically irrelevant that it is old people, often on fixed incomes, who are most likely to own a mortgage-free home and to have to pay the tax on a lump-sum basis. The liquidity problem which attracts so much attention in Canadian tax policy (see chapter five below) is thus especially acute for elderly homeowners. The case of the elderly also offers some of the best evidence for the importance of the 'benefit' approach to property taxes in shaping the attitudes of Ontario taxpayers.

As noted in chapter one, there is a sharp contrast between the alleged public perception of the increasingly crushing nature of property tax burdens and the relative *decline* in these taxes both in real terms and as a proportion of income. One reason for this contrast between perception and reality may simply be that most people think of property taxes in benefit terms, as most municipal officials clearly do.[10] The perceived rise in the 'burden' of the tax may thus really reflect a decrease in the benefits perceived as financed by this tax.

The property tax as now constituted may indeed be considered a sort of 'benefit' tax so far as municipally-financed services provide benefits primarily to people within the boundaries of the municipality. But there is much more dispute as to whether it may also be considered a way of measuring the benefits provided to particular properties. Many municipal officials (and others), however, clearly think that it does and therefore urge the need for non-property taxes to finance non-property services.

Various submissions to the Royal Commission on Metropolitan Toronto, for example, suggested that 'the property tax should only be used to pay for services to property and property owners' (Royal Commission, 1975, 11). The Blair

[9] On this capitalization effect, compare n. 24 in chapter one and the subsequent discussion in chapter three and appendix A.

[10] See Plunkett (1974, 1976) for further development of this theme with respect to municipal officials.

Commission (1977, 2-3) similarly received many submissions to this effect. The growth in 'soft' or 'people-oriented' municipal services should, on this line of reasoning, therefore be financed in other ways. Plunkett (1974, 1976) noted this argument but laid more stress on the desirability of broadening the focus of municipal decision-making beyond the narrow fiscal calculus, induced by reliance on the property tax, which he saw as distorting land use and other decisions. In contrast, the Smith Committee came out strongly against the benefit argument for property taxation (Ontario Committee on Taxation, 1967), as did the Blair Commission (Commission on the Reform of Property Taxation, 1977).

To an economist. a principal rationale for the existence of local government (assuming that individuals are, within limits, free to choose where they live) is that it permits the provision of public services in a diverse variety of ways to suit individual preferences. Despite the obvious problems with this theoretical notion, in reality fiscal decentralization and the local provision of, say, elementary educational services provide perhaps the best means we have of determining the optimal amount of such education which should be provided. The major difficulty in implementing this quasi-market approach to local finance is, of course, the readily observed fact that different individuals and areas have substantially different levels of income and wealth, and that interlocal mobility and local choice are not in fact free. Because it is generally accepted that the consumption of services such as education by individuals should not be dependent on their ability to pay, there are obviously severe difficulties in carrying this view too far. Nevertheless, for many purposes it *is* useful to think of local taxes, particularly the property tax, as, in a sense, a kind of membership fee one pays for residing in a particular area (Bird, 1976d, chap. 10).

It follows from the important role of the property tax as a direct source of finance for elementary and secondary education as well as for other municipal services that the user-charge component of local tax payments, broadly conceived, is not at all small, particularly in the relatively homogeneous dormitory suburbs in which increasing numbers of Canadians now live – and the residents of which, it may be argued, are coming to be increasingly important factors in Ontario politics. Indeed, this notion that there is a strong benefit element in local property taxes has a high degree of public acceptance, as is indicated by the frequency with which such groups as the old, farmers, and, to a lesser extent, cottagers seek (and often obtain) relief from all or part of their property taxes on the grounds that they receive no direct benefit from the school services which the taxes finance.

A strong general argument along these lines was made some years ago by Clayton (1968). He argued, first, that for urban residential property as a whole the Ontario property tax *did* approximate a benefit tax, and second, that because (on his estimates) business received only about 60 per cent as much benefits from municipal spending as residences, a *reverse* discrimination to that prevailing in Ontario was really needed.[11] In a further application of benefit reasoning to the property tax, Clayton (1968) also suggested that because the aged received fewer local government services - notably education - they should pay lower taxes.

Another 'benefit' argument sometimes used to explain the *de facto* discrimination common in most jurisdictions, particularly the harsher treatment of lower-valued dwellings, is that assessors may be applying, consciously or unconsciously, some kind of implicit benefit principle (Oldman and Aaron, 1965). The point here is that the inhabitants of these dwellings in all probability are perceived by assessors, themselves middle class, to receive substantial benefits from local government activities, whatever the objective facts may be.[12]

This argument does not, of course, help to explain the prevalent discrimination in favour of residences and against business. Moreover, its validity has been called into question in a more recent study of the city for which it was originally suggested (Boston). This later study suggested that a more important reason for the observed discrimination was simply the relative infrequency of changes in assessed values, which resulted in a shift in the effective tax burden towards those neighbourhoods, usually low-income ones, with slower rates of value increase (Engle, 1975). As this same factor has undoubtedly been at work in Ontario, a similar discriminatory pattern may perhaps be expected here for the same reason.

In sharp contrast to arguments based in one way or another on the validity of the benefit principle, the prevailing official wisdom in Canada stresses that 'there is no direct relationship between taxes payable and actual services provided to each property' (Intergovernmental Committee, 1974, 15). The weakness of the property tax as an *intra*-group benefit tax is thus stressed, often to the neglect of its possible merits as an *inter*-group 'tax price.'

Both positions, as usual, have at least some validity. If the appropriate ideal for local finance is to approximate as closely as possible to the efficient pricing of government-provided services, there should unquestionably be more reliance on specific benefit financing such as special assessments, and less on the general

[11] A somewhat similar conclusion emerges from the more theoretical treatment in Mieszkowski (1975), who also considers to some extent the importance of tax and expenditure exporting and importing (see n. 1 to preface).

[12] There is amazingly little literature on the distributive effects of local government services, but what little there is suggests that low-income residents, who presumably live as a rule in low-valued dwellings, in fact receive proportionately *fewer* benefits from local government services than those who live in middle-class residential areas: see Shoup (1969, chap. 5).

property tax (Bird, 1976d, chap. 11). That is, rather than attempting to introduce fine individual discriminations within the structure of the property tax, much more reliance could and should be placed on explicit user-charge financing of local services.[13] The property tax cannot really be very useful as a way of matching burdens with benefits *within* particular municipalities. The benefit case for favourable property tax treatment of residences, particularly owner-occupied single-family dwellings, is thus not very convincing.

On the other hand, the virtues in principle of the property tax as an *inter*-group benefit levy seem obvious for the reasons noted above, certainly when communities are relatively homogeneous in terms of housing and public goods consumption, as is increasingly the case in large metropolitan areas. These results hold to a large extent, however, even when stratification is not perfect, because of the phenomenon of capitalization (Mieszkowski, 1975). So long as individuals and families have some possibility of moving, the property tax and its incidence cannot strictly be considered in isolation from the associated expenditures, which is just as it should be in terms of standard democratic theory (though this dictum is necessarily ignored in most of this study).

A certain degree of discrimination against downtown commercial properties and low-income groups - both of whom have fewer options than middle- and upper-income residents - may also make sense if the local government is viewed as a revenue-maximizing monopolist levying discriminatory prices (Paul, 1975, chap. 4). The use of special tax concessions to induce *new* industries is of course perfectly consistent with generally higher taxation of existing business under this criterion. A similar conclusion was reached in a theoretical paper by Grieson (1974), who demonstrated that on efficiency grounds taxes should be heavier on those components of the tax base which are least elastic in supply. Since, as Fisher (1969) observed, taxes will tend in practice anyway to fall on those businesses which are least mobile, it is perhaps reassuring to note that this result is at least efficient, if not equitable.

All these arguments which hinge on the mobility of factors of production do not, however, appear to carry too much weight in Ontario. In the first place, the size of the province (and its dominance in the country) would appear to make the probability of tax-induced migration of residents out of Ontario much lower than in the case of the small municipalities discussed by most of the authors. The same argument applies to businesses, albeit with less force (especially because of the ease of access to other provinces and to the United States by capital). A second point is simply that the factors noted earlier as increasing the provincializa-

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13 As shown in detail in Bird (1976d), such charges need not be regressive and may, indeed, in some instances be more progressive than the property tax.

tion of the property tax have undoubtedly reduced the importance of intraprovincial differentials in the tax and hence the importance of tax-induced mobility of residents and businesses within the province.

On the whole, however, since capital tends to be more mobile than people, efficiency arguments, like benefit arguments, lead one to expect that *business* property should be treated more lightly than residential property. Two important exceptions to this rule may be downtown commercial property, which is 'locked in' in a way most other businesses are not and, perhaps more surprisingly, businesses operating in a national market with some degree of market power, which may perhaps be expected to 'export' much of their tax burden anyway (McLure, 1967, 1976).

Within the business sector, then, as within the residential sector, rather subtle discriminatory patterns may perhaps be expected to emerge for these various reasons. There seems no economic reason, however, to expect the degree of revealed discrimination in favour of homeowners in Ontario. The most probable reasons for the existence of this phenomenon are a somewhat atavistic belief in the social value of a sturdy yeomanry of homeowners - buttressed, perhaps, by small businessmen and farmers - and the straight political clout of the homeowner vote.[14] Even conservative governments, it appears, prefer votes to contributions when it comes to property tax policy, with business perhaps acquiescing in the resulting discrimination because it prefers *certain* taxes to lower taxes (Paul, 1975).

This line of argument does not, of course, explain why measures have been taken in Ontario in recent years to alleviate the presumed property tax burden on *tenants* (see chapter six). Perhaps the explanation lies in both the increased political importance and articulateness of this group of citizens and, so to speak, the conscience of those officials and politicians who truly believe the tax to be regressive. Because of the weakness in Ontario's case of most of the other factors

[14] For a similar conclusion about a very different instance, see Bird and Bucovetsky (1976, 47-9), where the obvious policy importance of small business and farmers is also noted.

The recent report of the Commission on the Reform of Property Taxation in Ontario (1977) supported the proposed differentially favourable assessment of residential property largely on two grounds: (1) the non-deductibility of property taxes for income tax purposes, and (2) the faster rate of increase in residential property values. Both of these are questionable, as pointed out in the notes to chapter one. A third argument, that increasing residential and lowering non-residential taxes would cause a revenue shift to the *federal* government (through the income tax) is, however, valid. The Commission also refers vaguely to their desire not to disturb the 'equilibrium' of the present system: by this, they may mean to recognize the probable capitalization of existing differentials, although this interpretation seems unlikely in view of their persistent ignoring of this factor elsewhere in the report.

considered by Paul to explain both *de facto* discrimination in favour of homeowners in Massachusetts and California, and *de jure* discrimination in states such as Arizona and Tennessee, the importance of public perception of the role and incidence of the property tax in determining what changes are feasible thus becomes even more obvious.

Once again naïve reformers have learned that the possibly important long-run gains of a tax change - in this case, to uniform market-value assessment - count for little against the short-run dominance of transitional costs, at least given the high time discounts obviously applied by politicians. An apparently simple proposal to 'improve' property tax administration by provincializing it, thus removing local inequities and upgrading assessment techniques, has in fact involved the provincial government directly, to an extent never before achieved, in the very heart of the local political system. One important result of this involvement has been the proposed formal institutionalization of the favourable treatment of residential property, apparently entirely for immediate political reasons.

ATTITUDES AND POLICY OUTCOMES

A recent survey of taxpayer attitudes in Ontario found that over half those questioned (53 per cent) felt they were getting their money's worth for the property tax, compared to less than half (45 per cent) who felt the same way about provincial taxes in general (Auld, 1977). While the precise significance of such results is probably doubtful, since it appeared that very few respondents really had any idea of the extent to which the property tax actually financed local spending, this finding stands in contrast both to the usual bad press received by the property tax and to a well-publicized US survey of a few years ago in which 45 per cent of those surveyed found the property tax to be the 'worst' tax.[15] Perhaps the safest conclusion that can be drawn from these results is that people tend to associate the property tax with local services and that Ontario taxpayers feel better served by their local governments than do their US counterparts.

In contrast to the revenue facts reported in chapter one and to these survey results, however, politicians are frequently quoted as saying that the homeowner is 'being strangled by property taxes' and newspapers often run headline articles about 'the plight of property taxpayers.'[16] No doubt it is true that when homeowners do their personal cost-benefit analysis of property taxes and municipal services, it seems evident to many that – as with the Post Office – they are paying more and getting less, though many others seem to feel the price is fair, as noted above.[17] The very visibility of the rate-setting process and, in many cases, of the size of tax bill, renders homeowners especially sensitive to the property tax, to the point where various inchoate resentments arising from inflation, increased population, increases in other taxes, and so on, may all in practice come to be focused on this levy.[18]

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[15] Interestingly, a more recent US survey by the same organization found this percentage had fallen to 29 per cent, with poor renters disliking the tax because of its presumed regressivity and homeowners, especially higher-income ones, stressing its administrative unfairness (Advisory Commission on Intergovernmental Relations, 1975a).

[16] Metro Chairman Paul Godfrey, quoted in *Toronto Star*, 10 January 1976, from which the other quote is also taken.

Some commentators have stressed the improbability of large rate increases emerging from the 'public rate-setting ritual' with which municipal governments, with only a two-year term of office, are burdened (O'Brien, 1975). The implication of such comments is invariably that the high public visibility of this tax is one of its greatest weaknesses. Presumably, the current proposals to make the return of the assessment rolls coincide with the biennial local elections (Ministry of Treasury, 1976b) will accentuate this problem.

It is no doubt true that the visibility of the property tax rate-setting process constrains municipal taxing authorities in a way no other level of government is constrained. What is much more doubtful is whether this is a bad thing. As Breton (1974) has observed, shortening electoral terms and making the cost of expanded government activity more visible constitute important means of making governments more responsive to the real needs and desires of their constituents. The results may not be beneficial for the governments, but they are for citizens in general. In this sense, then, municipal governments are probably in fact the *least* 'coercive' of all Canadian governments. They may not be able to 'lead' the people in the way that higher levels of government can and do – but they can also not 'lead' them in directions they do not want to go, a not unknown phenomenon in Canada. One's final view of the suitability of the property tax as an instrument for financing local government thus depends not only on the economic considerations discussed in this study but also on the most basic questions of political philosophy and practice, which cannot be discussed further here.

The common complaints about the property tax appear to focus especially on the problem of *liquidity*, and in particular on the difficulties faced by older taxpayers with low current incomes who hold most of their assets in the form of a house. In contrast to the preference of most economic analysts for the concept of 'permanent' or 'life-cycle' income (see chapter five), there is strong evidence that for most Canadians, and most Canadian politicians, a modified flow-of-realized-money income concept is closer to the 'correct' measure of 'ability to pay' - witness the current tax treatment of capital gains, imputed income items, bequests and gifts, and, for that matter the concern with the 'liquidity' aspects of property taxes itself. The popular conception of 'income' is thus simply money income currently received, and the standard by which the fairness of property taxes is judged is therefore their relationship to this income. Whatever the 'objective' burden of property taxes as calculated by the economist, the subjective burden as seen by the man in the street is likely to be that the tax treats elderly homeowners unfairly.[19] As shown in the present study (and also Bird and Bucovetsky, 1976), this problem is not nearly as easy to resolve in practice as economists seem often to assume. On the other hand, to let the hardest cases in this respect shape the future of the property tax is liable to distort seriously the entire provincial-municipal system in Ontario. This point is discussed further below, especially in chapters five and seven.

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[17] One might expect the aged to be especially dissatisfied, in part because of the importance of education expenditures. While Auld (1977) suggests that older people tend generally to view government expenditure as excessive, he does not explicitly consider the relation between age and degree of expressed satisfaction with the property tax.

[18] For further discussion of this sort of 'fiscal psychology,' see Bird (1970a) and the references cited there.

Even this brief excursion into a few facets of the property tax 'system' suggests that any attempt to analyze the property tax without taking into account the swirling penumbra of politics, sociology and psychology surrounding it is bound to leave out many of the forces motivating people - and politicians. The next few chapters, for example, focus on an issue of particular interest in the context of the present study, the incidence of the property tax. After a careful consideration of what economic theory has to say about this important question, the conclusion that emerges from this discussion is that economics is not all that helpful to policy-makers at the present time and that what matters, at least for some purposes, appears to be not what exists - since we do not really know much about that anyway - but what people *think* exists.

The attempt to demonstrate in the remainder of this study (1) that we do not know much about the incidence of the residential property tax and (2) that the property tax credit may have increased, not reduced, property taxes relative to what they otherwise would have been, may well have as little effect on public perception of these issues as the demonstration in chapter one that property taxes in Ontario have not increased in any meaningful sense anyway in recent years. As in the case of Canada's disappearing death taxes, though perhaps with much more justification in this case, 'practical' men, whether politicians or taxpayers, appear singularly immune to the results and speculations of economists - unless, of course, they happen to coincide with what they believe already. In few other areas of economic policy is it made clearer to the aspiring technician that what matters are the *results* of measures and not their intrinsic merits in respect to some abstract standard.[20] To this dictum, however, an important addendum is necessary: what matters in the first instance are not the 'real' results (in some econometrically-measured objective fashion) but only the 'perceived' results – for only the latter are 'real' in a relevant political sense. The hope of studies such as this, of course, is that objective analyses will feed back into and alter perceived realities over time. The main purpose of the present chapter has simply been to alert the reader to a few of the vital questions underlying this whole discussion, which cannot be further considered here.

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[19] On the importance of 'subjective' burdens - which are, after all, the only ones which 'really' exist - see Buchanan (1969, 52-5).

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20 This line of argument is carried further in Bird (1976f). It is, of course, a controversial one because it deals in part with the very basic issues of consequential vs. procedural equity – issues discussed at length for centuries by philosophers, with no end yet in sight.

3

The incidence of the property tax: theory

The traditional approach to the incidence of the property tax considers the tax as being divided, in effect, into two principal components, the tax on land and the tax on improvements (by which is meant mainly structures).[1] As the supply of land is usually assumed to be fixed by nature, it follows that the part of the property tax which falls on land must be borne by the owners of the land at the time the tax is imposed, because they cannot shift the burden to others through altering the quantity of land supplied. Land taxes are therefore assumed to be capitalized, that is, to result in a fall in the price of land.[2]

Because the supply of structures may be altered through investment decisions, however, that part of the property tax which falls on structures may be shifted forward to the consumers of the services provided by structures. If the supply of structures is assumed to be perfectly elastic, at least in the long run (that is, any amount will be supplied at the given rate of return) or if the demand for structures is completely inelastic, *all* of the tax on structures may thus be shifted forward to tenants with respect to rented residential property and to the consumers of the goods and services produced by commerce and industry with respect to non-residential property. For owner-occupied residences, the tax on structures is borne by the owners in proportion to their (imputed) housing expenditures, while they also bear the tax on land in their capacity as landowners.

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[1] Earlier versions of most of the argument in this chapter may be found in Bird (1976a) and (1976b).

[2] In principle, the price at which a capital asset sells equals the discounted value of the stream of net income which the asset is expected to yield in the future. The imposition of a tax on certain assets (land) but not on others will therefore cause a fall in the price of the taxed asset relative to that of an otherwise equally valuable asset, by an amount just sufficient to make the total cost (including tax) of owning the two assets equal. The only exception to this result (in a perfect market) would be if the tax were shifted, whether to consumers or, through altering the rate of return, to all owners of capital (see later discussion in this chapter). To the extent that such capitalization takes place, the owner of the property at the time the tax is imposed bears the *entire* burden of the tax, since future purchasers will pay only the new, lower prices. Appendix A summarizes the extensive (though conflicting) evidence on the extent to which property taxes are actually capitalized in this fashion.

Although, as seen below, previous quantitative estimates of the incidence of the property tax have generally employed precisely these assumptions, in reality both tenets of this strong version of the traditional theory - that the supply of land is completely inelastic and the supply of structures completely elastic - are open to question. In the case of agricultural land, for example, it is clear that the assumption of completely inelastic supply is unrealistic, since the quantity of agricultural land can always be expanded at some price (Bird, 1974, 167-8). More generally, from the point of view of any particular taxing jurisdiction (the appropriate perspective for this analysis in any case, as noted below) it is also not true that the supply of land is fixed. Not only can new land be created through landfill operations, but municipal boundaries can be altered (Polinsky and Rubinfeld, 1974; Aaron, 1975, 50-51).[3]

If the supply of land is not fixed, taxes on land will of course tend to affect the quantity of land supplied, which means they may be shifted to other factors of production or to consumers rather than capitalized. Heavier land taxes in an urban area surrounded by undeveloped farmland, for example, may reduce the supply of land brought into urban use, thus raising housing prices and affecting wages and profits as well as rents. Relatively lighter taxes on farmland than on urban land (as in Ontario) will of course have the same result.

As summarized in appendix A, there have been a number of capable empirical studies of property tax capitalization in recent years, most of which confirm the existence of this phenomenon, thus suggesting that at least part of earlier taxes

[3] In addition, vertical space is in a sense equivalent to 'land.' If, for example, improved building techniques permit higher buildings, the supply of urban building 'land' has in effect increased. The same sort of phenomenon occurs with agricultural land when yield-increasing technology is applied to a given land area. Heavier land 'taxes' may thus encourage the development and adoption of land-saving technology - that is, so to speak, increase the relevant supply of land. The agricultural evidence for such induced innovation has been documented extensively by Hayami and Ruttan (1971), but the urban case does not appear to have been explored yet. (Note that the presumed substitutability between 'land' and 'investment' in this line of argument tends to call into question the usefulness of the traditional split between land and improvements.)

on land were capitalized, that is, resulted in a reduction of the selling price of the land at the time they were imposed. These taxes were therefore borne by the property owners at the time they were levied (and their heirs), since the present owners paid sufficiently less for the taxed property to ensure that they received a normal rate of return after paying the property tax. Capitalized taxes thus in effect do not exist so far as present income recipients are concerned, so exactly what is meant by the 'incidence' in relation to income of such a tax is rather obscure (Thurow, 1975, 189). To the extent that past land taxes have been capitalized, current landowners can be said, however, to bear the tax in the important sense that they would be the gainers if it were removed.

As for that part of the property tax which is assumed to fall on structures, the traditional assumption of a completely elastic supply is of course a long-run assumption. Even this assumption has been questioned by Grieson (1974), who argued that the supply of structures in urban areas cannot be perfectly elastic because the marginal cost of building a given space rises as the height of the building increases. Over a long enough time period, however, it still seems reasonable to assume that the supply of invested capital in any area is highly elastic.[4]

If the tax on structures is to be fully shifted forward in the short run, on the other hand, it can only be because the demand for the services provided by structures is completely inelastic. Although this assumption appears often to be made in popular discussion, particularly with respect to low-income housing, it too appears to be somewhat exaggerated, especially from the perspective of any particular taxing jurisdiction. Even poor people can, and do, move to other areas every day. Though the existence of leases and search costs make this process far from perfect, the high mobility of the population in the country in general and within urban areas in particular suggests that a *completely* inelastic demand for housing in any jurisdiction would be at most a transitory phenomenon.[5] Some degree of demand inelasticity, however, coupled with some degree of supply elasticity - even in the short run, for example, through reductions in building maintenance and the quality of building services (Heilbrun, 1966) - seems likely to be common.

The traditional theory of property tax incidence, even modified along the lines discussed here, would thus predict partial forward shifting of taxes on improvements in the short run. In view of the greater ease of moving money than

[4] Because Grieson's (1974) argument assumes a fixed technology, it does not really meet the issue raised in the preceding note - which also, it should be noted, really suggests that the relevant long-run definition of 'invested capital' probably would not distinguish land and buildings.

[5] This mobility lies at the heart of the well-known Tiebout (1956) argument, as empirically supported by Oates (1969, 1973) though questioned by others (see appendix A).

people, and the ensuing greater increase in the elasticity of supply than of demand over time, the degree of forward shifting in the (very) long run would in all likelihood be greater and may indeed tend to be complete, as in the strong version of the traditional view. So far as the tax on land is concerned, the modified traditional view would suggest a fairly high degree of capitalization in the short run, decreasing over time as the long-run elasticity of supply of land comes into play.[6] In total, then, the modified traditional view would predict some shifting and some capitalization in the short run, and a considerably higher degree of shifting in the long run. It is important to note, however, that all these predictions concern the incidence of tax *changes* in particular areas and not the incidence of 'the' existing property tax in Canada or Ontario.

A major problem with the usual application of this traditional approach to the incidence of the property tax is that the critical dependence of the results on the specifics of the local situation has been neglected in favour of sweeping assertions based, at best, on casual and limited observation. If there is one thing which the traditional theory makes clear, for example, it is that the incidence of a given increase in property taxes on low-rent rental housing in Toronto is almost certain to be different, especially in the short run, from the incidence of a similar increase on low-income rental housing in, say, Kingston, simply because the different market situations in the two cases will result in different proportions of the tax being shifted forward.[7] Yet the usual analysis of property tax incidence lumps the two together and makes the same (extreme) elasticity assumptions about both.

What all this amounts to is that, as Simon (1959, 429) noted, 'practical application of the theory of incidence requires investigation of the validity of some of the empirical assumptions which are crucial to it - notably the elasticity of demand for housing, and the nature of the competitive demand functions for housing on different sites.' In other words, to apply the traditional theory of the incidence of the residential property tax properly, a great deal of empirical information about the characteristics of the housing market in the particular area under study is required.

These defects in application, however, should not obscure the fact that the traditional theory, provided the conditions of the relevant markets are correctly specified, may provide a useful guide to local policy-makers with respect to the impact on the price of housing services of *changes* in *local* taxes in the short run. What is primarily required to reap full benefits from the theory is better knowledge of local housing markets. The incidence of a marginal change in a local tax over the long run may also be analysed within this framework, provided that the relevant market functions over time are properly specified – a much more complex task with less satisfactory results as the time period lengthens, owing to the increasing implausibility of the assumption common to all such analysis that other things remain equal. In principle, a general equilibrium approach is always necessary for tax analysis, whether explicitly or implicitly, but it becomes more important in practice as the years go by.[8]

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[6] The Edel and Sclar (1974) study suggests that something like this may actually take place. Also, as argued in notes 3 and 4 above, in the long run the distinction between 'land' and 'capital' loses significance anyway, so that the impact of the property tax should be considered as a whole.

[7] This point holds irrespective of whether the *income*-elasticity of demand for housing in the two cases is similar, as is usually assumed: see discussion in chapter five below.

In addition to this important limitation, the traditional approach to incidence analysis may not yield a very reliable indication of the effects on income distribution of an *existing* property tax for a number of reasons – the capitalization problem, the varying stages of market adjustment to changes in tax rates which took place in past years, and so on. Properly employed, however, the traditional approach can, and should, be helpful in the analysis of the local incidence implications of *changes* in local property taxes.

The fact that only *changes* in taxes can be analysed with much assurance is, contrary to what many seem to think, actually more of a blessing than a curse, because it focuses attention on the policy-relevant question of the incidence of tax changes, rather than on the essentially irrelevant issue of the incidence of the existing tax system. As McLure (1975, 13-14) has noted: 'the really important use of incidence studies is in the determination of how tax burdens at various points in the income scale would be altered by changes in the tax systems.' This is clearly true with regard to the municipal property tax in Canada, since the probability of its complete elimination in the near future is presumably zero. In theory, as in empirical work, the fact that we cannot do what we do not need to do is no great loss. What should be of much more concern to analysts and policy-makers alike is how little we know about the crucial empirical parameters needed in order to apply a realistically modified version of the traditional theory in particular local circumstances.

The required focus on marginal tax changes is thus in reality beneficial both in relating the theoretical discussion more closely to the real questions of property tax policy and in emphasizing the need for empirical verification of the assumptions of the theory. In part, the same can be said about the earlier stress on the fact that only *local* tax changes can really be considered in this framework. After all, local property tax rates are set annually by local authorities, and it is presumably the impact of their own decisions that is the main concern of local policy-makers. So long as the particular municipality in question is the only one which changes its tax, all is well, and the traditional theory, modified as seems appropriate, can be employed without further qualms as a guide to at least the short-run distributional impact of the tax change.

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[8] McLure (1976) makes a strong case that the general equilibrium approach of the 'new view' (see below) is *always* correct in principle.

In reality, however, municipal tax rate changes in Ontario are determined to a substantial extent by provincial policies, as shown in chapter two. If one municipality raises its rates, others are likely doing the same thing, if not necessarily to precisely the same extent. Furthermore, the provincial policies which affect municipal tax rates in turn respond to federal policies affecting provincial budgets, and federal policies in turn reflect the workings of the national, continental, and even worldwide economy. In short, a given increase in the tax rate in any one municipality in a particular year may well be matched by similar increases in a much broader area – the metropolitan area, the province, the country, or North America as a whole. In these circumstances, the traditional approach to property tax incidence ceases to be very useful. It can no longer be assumed, for example, that real income and all other prices (including factor prices) remain unchanged. A general equilibrium approach is then needed to determine even the short-run incidence of a general tax change: in recent years such an approach has been applied to the property tax under the name of the 'new view' of property tax incidence.

THE NEW VIEW

In a sense, the simple traditional view of the incidence of the property tax is that those who pay the tax over to the government, the owners of property, do not, except for owner-occupiers, in fact pay the tax: rather they shift the burden on to tenants and consumers. Curiously, the 'new view' of property tax incidence which has recently surfaced in academic circles is that property owners *do* pay property taxes – not just the owners of the taxed property, however, but *all* property owners. The key factor underlying this striking change in results is a change in the perspective from which the problem is viewed. The traditional view deals, in effect, with the incidence of the tax in a particular locality; the new view, on the other hand, focuses on the incidence of the tax in the country as a whole. It is not too surprising that when the perspective is thus changed, something different is seen.

The initial assumption in the new approach to the incidence of the property tax is that the tax can in the first instance be viewed as being imposed at a basic average rate on all forms of property.[9] If the total supply of land and capital is fixed and certain other quite stringent conditions are met, the burden of such a tax must be borne in proportion to the ownership of capital for, in essence, the same reason as a land tax is borne by landowners in the traditional analysis. The property tax will therefore have no effects on the price of housing or of other goods: all it will do is to lower the profits and rents of capitalists and landowners. Since capital ownership is generally considered to be more highly concentrated than income, the incidence of such a tax must be progressive.

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[9] Although first set out by Brown (1924), and discussed by Simon (1959), this view is now usually associated with Mieszkowski (1972).

The essence of the new view is thus that the property tax may, on a nationwide basis, be considered initially to be a tax on capital, affecting the rate of return on all capital - and that it is therefore progressive in its incidence. This conclusion is in sharp contrast to the usual application of the traditional view, which concedes that the capitalized part of the tax may be progressively distributed but suggests that the bulk of the tax is distributed in proportion to the consumption of housing and other goods and services, and that the incidence of the tax as a whole is therefore clearly regressive with respect to income (since consumption falls as a proportion of income as income rises).

In reality the property tax is by no means a uniform tax on all forms of capital. A good deal of the capital stock is exempt from this tax,[10] and there are also wide variations in the effective rate of tax (the rate in relation to market value) both by type of capital and by taxing jurisdiction. These variations give rise to so-called 'excise tax effects,' which may be analysed more or less along the traditional lines sketched above.

The differential portion of taxes on land in fixed supply will, for example, tend to be capitalized, while differential taxes on reproducible capital will lead to movements of capital among industries and jurisdictions so as to tend to offset these differentials and ensure that investors obtain similar after-tax returns

[10] The Ontario Committee on Taxation (1967, vol. 2; 129) estimated that at least 20 per cent of real property in Ontario was exempt from the property tax, and discussed this problem at length. The more recent report by the Intergovernmental Committee (1974) does not suggest any decline in the significance of exemptions. Data in Poduluk (1974) suggests, very roughly, that real estate may constitute a little over half the asset holdings of Canadian family units. These estimates do not, of course, include government and corporate holdings of real property.

Netzer (1973) estimated that about 40 per cent of the capital stock in the United States was not subject to the property tax in 1966, so that the average effective rate of the tax on US capital was about 1 per cent (rather than the 1.7 per cent on taxable capital alone). The available Canadian data do not permit such a direct comparison of the property tax base as a whole with total tangible wealth, but there seems no reason to expect that the results would be very different: in 1976, for example, it appears that at least 41 per cent of non-residential structures in Canada would have been exempted by reason of ownership (calculated from data in Statistics Canada, 1977).

on all investments. These capital shifts in turn will affect wage rates as well as other factor and product prices in a complicated fashion that has not yet been worked out in theory (let alone in practice).[11]

Although these important questions remain unresolved, the general conclusion of most of the academic literature on the new view of property tax incidence is clearly that the tax is borne much more in proportion to the receipt of income from capital than it is in proportion to consumption.[12] In other words, the conclusion which most have drawn from this new approach to the incidence of the property tax is that it is fundamentally a progressive rather than a regressive tax. Although few Canadian scholars appear as yet to have done much work on this matter, there has been at least some evidence of a tendency to accept the applicability of the new view to Canada rather uncritically.[13]

When properly formulated there is no doubt that the conclusions of the new view follow logically from its premises. Moreover, the logical structure of this approach is clearly superior in principle to that of the traditional approach.[14] What matters then is, first, whether the particular premises leading to the progressivity result accord with Canadian realities and, second, whether the questions answered by the (unmodified) new view are those which are being asked.

The principal difference between the strong version of the traditional approach to property tax incidence and the new view concerns the elasticity of capital supply. The old view assumes (implicitly) that the supply of capital is perfectly elastic while the new view assumes explicitly that it is perfectly inelastic. It was suggested above that the traditional argument might well be roughly correct, especially in the long run, for a particular locality. The unmodified new view, that the average effective rate of the property tax basically falls on capital owners, seems, however, to be misleading for Canada, and therefore for Ontario. Canada is, relative to the United States, an economically small and open country, particularly with regard to capital flows across the border. The rate of return on capital in Canada is thus probably set in a fundamental way by that in the United States (or, more generally, in the world as a whole).

[11] Mieszkowski's (1972) analysis follows the pioneering analysis of Harberger (1962) in this regard: for a useful recent appraisal of the post-Harberger work in general equilibrium tax analysis, see Break (1974). See also McLure (1976) for a more detailed exposition of the variety and importance of the excise effects of property taxation.

[12] Note that in the new view there is no point in distinguishing between the residential and non-residential property tax.

[13] See Crowley (1975). A more sceptical appraisal may be found in Auld and Miller (1975, 165-9).

[14] It is by no means the last word, however: basically an extension of Harberger (1962), the 'new view' is subject to the basic criticisms put forth in Asimakopulos and Burbidge (1976) with respect to such features as its assumption of continuous full employment.

On the basis of some slim evidence, it may perhaps be hypothesized that the average effective rate of property taxation in Canada is a little less than that in the United States.[15] If the average level of the tax is in fact lower in Canada *and* the rate of return on capital is, in effect, set in the United States, then in theory capital will tend to flow into Canada until the before-tax rate of return in Canada falls sufficiently to offset the tax differential. In short, assuming the US tax rate is a little higher, Canada will end up with a larger capital stock and hence higher real wages. In this sense, then, the basic average property tax in North America may well be progressive in its over-all impact on the distribution of income in Canada – but it is the fact that the Canadian tax is lower than the US tax and not the Canadian tax itself which has had this effect.

15 For example, in the US property tax revenues account for 4 per cent of the GNP compared to only 3 per cent in Canada. The Canadian government sector is bigger, but the property tax finances a smaller part of it. This result is, of course, not surprising in view of the much more important role of provincial transfers to municipalities in Canada than in the United States. In 1970, estimated effective property tax rates in Canadian cities ranged from around 1.4 per cent to 3.7 per cent, with most rates apparently in the 2-3 per cent range (Dominion Bureau of Statistics, 1970). Some US cities had effective rates in 1972 of 5 per cent or more (Aaron, 1975, 7). (US property taxes are of course deductible for income tax purposes, which is not true for residential taxes in Canada, but it is the gross incidence which is of interest here.)

The Canadian effective rate data reported above were based on a rather curious survey and are highly suspect, as was recognized when Statistics Canada dropped this information – versions of which appeared only in 1969 and 1970 – from later publications in the *Principal Taxes and Rates* series. Indeed, since 1970 not even *nominal* rates have been shown for municipal property taxes, though compilations of nominal rates had appeared in the 1955 to 1968 issues of *Principal Taxes and Rates*. Admittedly, it is difficult to compare these data, as this publication now notes, but it seems inexplicable that no efforts have been made to rectify this situation at a time of increasing concern with the incidence and effects of property taxes.

Private researchers have sometimes been more daring, however. Jenkins (1973), for example, took data available from Statistics Canada and calculated that the average effective rate of property taxes in Canada in 1965-9 was only 1.5 per cent, though the rate on the housing sector was estimated to be closer to 2.5 per cent. Although comparisons are difficult, this general rate appears to be on the whole a little below that in the US as noted in note 10 above. Applying Netzer's estimate that only about 60 per cent of capital is in fact taxed to Jenkin's estimate of the effective rate on taxed capital, the 'basic' effective rate in Canada in the late 1960s may perhaps have been 0.9 per cent, compared to 1.0 per cent in the US. (Although the US effective rate on single-family homes in 1969 was estimated at only 1.8 per cent (Peterson and Solomon, 1973, 70), Jenkins (1973, 21) estimates that the net incidence of the Canadian tax on owner-occupied homes was also 1.8 per cent after allowing for the non-taxation under the income tax of imputed income from this source.)

To see this, consider what would happen if the US tax is increased: Canadian labour becomes still better off. But if the *Canadian* tax is increased while the US tax (and by assumption, the rate of return on capital) are held constant, a significant part of the additional tax burden would fall on Canadian labour and hence be regressive, since labour income falls as a proportion of income as income levels rise. For example, if as a result of the current pressures on provincial finances grants to municipalities are cut and the effective rates of the property tax increased in Ontario, the distributive impact of the *increase*, even on the purest new view, would appear to be basically regressive (unless rates rose simultaneously elsewhere on the continent).

These effects may well be accentuated if, in addition, the property tax in North America as a whole tends to reduce the level of saving. If an increase in the property tax results in a fall in saving, the size of the capital stock will be lower than it would otherwise be, and the tax burden will tend in the long run (which may, however, be *very* long) to be shifted in part to less elastic factors such as labour and land (Feldstein, 1974). To the extent the tax is shifted to labour, Canadian workers might then suffer a double blow. It is very difficult to assess the importance of this point, however, because the scanty available evidence on the impact of changes in the rate of return on *total* saving may best be described as inconclusive. In any case, at least in principle, any negative effect of a particular tax measure on total saving can, if desired, be offset by other fiscal and monetary policies.

Similar adjustments in capital stock among industries and jurisdictions may of course take place *within* Canada. Aaron (1975, 45) suggests that on balance the effects of such shifts are likely progressive in the United States, largely because higher tax rates tend to be found in jurisdictions with higher income levels, while intercommodity differentials probably tend to cancel out. (He agrees with Break (1976) that within major urban areas landowners are likely to bear a substantial proportion of any tax differential, owing to the mobility of workers and consumers relative to land.) In these circumstances, the basic progressivity of the property tax owing to its nature as a tax on capital will be enhanced by these 'excise effects.'

The picture is more obscure in Canada. The provincial role in the property tax field is much more important in Canada than is the role of the states in the United States. Not only is the tax now basically provincial in New Brunswick, Prince Edward Island, and with respect to assessment, in Ontario and Nova Scotia, but local tax rates are at least partly determined by provincial grants and other provincial policies, as argued in chapter two above. Intraprovincial tax differentials in Canada might thus be expected to be smaller than those in the

United States.[16] Since most provinces are bigger than the states in relative size anyway (and interprovincial differences are in turn offset slightly by federal equalization of school taxes[17]) it seems possible that the variations in effective property tax rates across Canada may well be less than those within the United States. If so, interjurisdictional adjustments in terms of the movement of reproducible capital would tend to be *less* important within Canada as a whole and Ontario in particular, though the presumed international mobility of capital must also be remembered in this connection.

While no firm conclusion is possible, it thus seems less likely in Canada than is apparently the case in the United States that the interjurisdictional differentials in the property tax add much, if any, progressivity to the tax. In Ontario, for example, although the very highest property taxes (in relation to income) are in the most highly-urbanized, and high-income, parts of the province, there is no significant statistical correlation between property taxes as a proportion of income and the level of household income in different regions.[18] Perhaps the best conclusion that can be reached on the basis of the scanty available evidence, then, is that the 'excise effects' of the interjurisdictional differentials in Ontario do not clearly affect the progressivity or regressivity of the property tax one way or another.

Another qualification which has sometimes been made to the unadorned new view is to argue that landlords – assumed to be able to exercise some restrained monopoly power – will use increases in the property tax as an excuse for raising rents, so that there is a short-run shifting of the property tax which takes place even before the capital and excise tax effects come into play (Musgrave, 1974). Common as it is, however, the assumption that landlords can and do fully shift forward *all* property tax increases to tenants seems rather implausible as a generalization.[19]

For one thing, the property tax is proportional not to rent but to value, and rent-value ratios are not constant for all values (Peterson, 1972). Since the proportion of tax included in rent therefore varies from property to property, even collusive landlords not previously exercising their full market power appear unlikely to be able to shift it uniformly.[20] Furthermore, there is a good deal of evidence suggesting that some of the burden of an increase in the property tax will fall on the owners of rental property even in the quite long run, because the elasticity of supply of rental structures is low (Netzer (1973) and studies by Orr (1968), Gustely (1974), and Black (1974) reported in appendix A below).[21]

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[16] In the US in 1972, for example, rates varied from less than 1 to over 5 per cent (Aaron, 1975, 7) while in Canada in 1970, the interjurisdictional variation (in a much less comprehensive analysis) appeared to be from 1.4 to 3.7 per cent (Dominion Bureau of Statistics, 1970).

[17] See Maxwell and Carter (1974) for a discussion of this important – though as yet limited – innovation in federal-provincial fiscal relations.

[18] Based on unpublished estimates by Ministry of Treasury (1976c). See also chapter seven below.

[19] In addition to the references to provincial reports in note 2, chapter one, see also Commission on the Reform of Property Taxation (1977, 25) which appears to accept full forward-shifting to tenants without question – but suggests that the process may be asymmetrical in that landlords will not willingly pass on *decreases* to tenants.

The recent advent of rent control in Ontario has, of course, made forward shifting much more probable than before: as always, cartel-like behaviour is easier to sustain when supported by government than when opposed by it. Nevertheless, preliminary investigations of the land and housing markets in Toronto, for example, do not suggest that market conditions are as conducive to shifting as is commonly asserted.[22] There may well be some short-run shifting in some segments of the market but it is hard to see grounds for assuming this shifting to be pervasive and complete. The evidence in support of full forward-shifting of property taxes to tenants is thus quite shaky, as is the theoretical support for this conclusion, whether one approaches the question of property tax incidence through the new view or the old.

IMPLICATIONS FOR ONTARIO

Although the above discussion of both the old and new views is highly compressed, it should be clear by now that the current state of the art with respect to the incidence of the property tax is basically unsatisfactory. As Break (1974,

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[20] The similar assumption generally made about the tax on non-residential structures is even more questionable. Owing to the different relative importance of taxed structures in the production of various goods, the tax is not proportional to output. It therefore cannot be simply shifted forward by those firms which use many taxed structures without the risk of losing some business to firms which use fewer taxed structures and consequently have to raise their prices less to recoup the tax (Gaffney, 1972, 419). Even on the traditional assumptions, then, full forward-shifting of the tax on commerce and business seems implausible. (In addition, the fact that families at the same income level may consume widely varying baskets of goods and services means that the dispersion of even a shifted tax within income classes may exceed that between classes. This last comment may, of course, be made about all income class estimates of tax burdens, as noted in chapter five below.)

[21] It is also unclear in the usual discussion of these issues whether landlords are assumed to shift the *gross* increase in the property tax or only the increase *net* of the tax saving realized because they can deduct property taxes for income tax purposes.

[22] This is our own interpretation of studies being undertaken for the Ontario Economic Council by Professor Muller of McMaster University and Professors Markusen and Scheffman of the University of Western Ontario.

164) put it: 'The present state of knowledge about the incidence of the general property tax is like that of an audience at the end of the second act of a complex mystery drama. The degree of uncertainty about the final outcome is probably greater than it was at the end of the first act, but at least some of the seeming certainties of the first act have been dispelled.' In these circumstances, the most sensible attitude to property tax incidence is probably that of the agnostic rather than the true believer in one or the other creed.

If nothing else, it now seems obvious that much more information is needed on many points before the incidence of the property tax in Ontario can be determined with much confidence: the elasticities of substitution in production and consumption, the elasticities of supply and demand for capital, the mobility of factors, factor intensities, the degree of competition, the initial tax structure and its income effects, and so on. All of these facts are extremely difficult to determine, and in all probability most of them will not be determined with much certainty for years to come. Perhaps even more important, the above discussion suggests clearly that there is no one answer to the question 'who pays the property tax?' anyway: rather, there will be many answers depending on the sizes of the parameters listed above and the time and geographical framework within which the question is asked.

A good deal of further work in the development of property tax incidence theory can no doubt be anticipated in the near future, as can various attempts to confirm or deny the empirical soundness of this or that assumption in the new (or traditional) view. The result of more activity along these lines will, however, almost surely be *increased* uncertainty about the incidence of this tax for some time to come.[23] The general-equilibrium approach to tax incidence is a new art, with a long way to go before it develops into a science with obvious direct policy implications, but this does not mean that the old view holds firm because the new view proves unsteady in some respects. Rather, the main point of this chapter is that *all* views on property tax incidence are, and will remain, uncertain, and that the search for a single, simple answer to so complex a question is a useless, misleading, and unnecessary search anyway.

In this context, it is therefore particularly important to specify clearly the questions that one is concerned with when one considers the incidence of the property tax. If one's major concern is with a particular tax change in a particular city, something much like the traditional approach may well yield an answer close to the truth; if one's major concern is with the differential incidence of property taxes in general, however, only the new approach seems to offer much

[23] See, for example, the reference in n. 14 above.

promise of success. In either case, close attention will have to be paid to far more variables and specific conditions than has been the case in previous Canadian studies, which have generally followed a strong and over-simple version of the traditional approach and hence tended to overstate significantly the regressivity of the property tax (see chapter four).

The present discussion of incidence theory cannot, in the absence of any knowledge of so many crucial variables, reach any firm conclusions with regard to the incidence of the property tax in Ontario. Tentatively, however, the following points emerge: (1) the basic average effective rate of property taxation in North America (say, 1 per cent) is probably largely borne by capital owners and is thus progressive over all (except for its possible regressive long-run effects on savings rates). (2) Because the average effective tax rate in Ontario is probably a little below the general average tax rate on capital in North America, the effects of an increase in the Ontario rate would, however, probably be regressive in terms of labour incomes. (3) Interjurisdictional differences in tax rates within Ontario probably do not significantly affect these conclusions, particularly because rates in different municipalities tend to move together. (4) Especially in the short run, increases in property taxes in Ontario which differ significantly from the average effective rate tend to be borne partly by landowners (including owners of rental property) through the capitalization effect, but they are also probably in part shifted forward, with the amount of such shifting tending to increase in the long run: the incidence of the capitalized part of the tax increase tends to be progressive and that of the forward-shifted part to be regressive.

On balance, then, the property tax in any particular municipality at any particular time is in a sense simultaneously both progressive and regressive: at worst, it is probably mildly regressive at the bottom of the income range, especially for low-income homeowners; otherwise, it is probably more or less proportional or even mildly progressive. The implications of this conclusion will be developed further after a closer discussion of the quantitative incidence of the tax in the next chapter. For the moment, it is sufficient to note that while this ancient levy is certainly not the best of all possible taxes, it is also, it now seems, not necessarily the hopeless fiscal villain it has sometimes been made out to be.

Even the strongest American critics of the new view now appear to agree that the assumptions employed in earlier quantitative studies made the property tax in that country look far more regressive than it probably is. Netzer, for example, whose 1966 study has generally been taken as the 'bible' on this question in Canadian studies, in a 1973 reconsideration of the question concluded that '... even if forward shifting were the rule, the incidence of the tax would not necessarily be regressive,' and said 'I agree with the critics that the property tax need not be obnoxious on equity grounds' (Netzer, 1973, 534, 535). Nevertheless, he argued that, as actually administered, the tax did in fact usually tend to be 'obnoxious,' largely because of the assessment biases discussed in chapter one.

No matter what one thinks of the incidence of the property tax when viewed as a concept, the way in which the tax is actually administered thus remains vitally important, particularly to how citizens *perceive* the tax, and consequently to how they react to proposals to change its role in the fiscal system. A tax which is frequently reassessed on a uniform, province-wide basis at market values, as discussed in chapter one, would be a quite different tax in practice from the present non-uniform, infrequently altered, locally-administered levy found in Ontario.

The elimination of the various differentials attributable to the present uneven administrative system would of course lead to windfall capital gains and losses, perhaps substantial ones, insofar as the differentials had been capitalized, but the result might be a more uniform and hence a more progressive tax.[24] It would in any case be a sounder instrument on which to base local finances: though such reforms would do nothing to alleviate the struggle between levels of government to shift the political costs of levying taxes, they might remove some of the current unwarranted criticisms of the *principle* of property taxation and direct them, more properly, to problems with the *practice* of property tax assessment. More or less the same conclusion also emerges from the deliberations of the Commission on the Reform of Property Taxation in Ontario (1977).

In view of the severe conceptual and statistical problems bedevilling *all* incidence studies, however (even assuming there was full agreement on the applicable incidence assumptions), the safest path for policy-makers might be to pursue those policies that would be considered desirable whatever the incidence of the property tax turned out to be. Administrative reforms like those mentioned above might, for example, continue to be advanced, along with policies to alleviate observed financial distress in certain groups of the population, irrespective of whether these groups are assumed to bear an undue portion of the property tax or not.

Policies which have their principal justification in certain assumed patterns of property tax incidence, however, appear to be on rather shaky ground in light of the recent upheavals in economic thought on this question. Incidence results will

[24] Although he supports administrative reform, Aaron (1975, 58) perhaps makes too much of the case against such reform because of the inequities resulting from capitalization. The main problem in this respect in Ontario appears to be with regard to farmers and single-family suburban homes – and, as suggested in chapters one and two, the political facts of life are such that governments will surely soften the blow for these particular taxpayers anyway.

for years to come read more like a catalogue of possibilities than a simple, unequivocal conclusion, and the sooner we learn to live with this fact, uncomfortable as it seems to make many, the better. The implications of this conclusion for the property tax credit are considered at more length in chapter seven below.

Finally, a general comment which can be made with regard to this whole issue is that all the fuss about the incidence of the property tax is, in a sense, little more than a tempest in a teapot anyway. The real policy issue for concerned citizens is presumably not the incidence of any one tax but the observed distribution of income and wealth. If we do not like the distributional results of the economic system, we can try to change them in various ways - preferably, however, not by messing about at the fringes of any one tax, especially a local tax, but by developing more effective general tax-transfer schemes to achieve the results we want.[25] Equally important, as noted earlier, the property tax is the mainstay of the local fiscal system, which is not (and should not be) overly concerned with distributive issues anyway.[26] More attention should probably be paid to making the property tax a more *efficient* and productive fiscal instrument than to redressing its regressivity, real or perceived - though the latter may be a necessary step, in some instances, to the former.

The bad press this tax has had has for too long obscured its virtues - actual and, especially, potential - as a source of local revenue. As the new academic view, that all property taxes may not be so terrible after all, slowly permeates the public consciousness over the next few decades, perhaps we shall see more emphasis on accentuating the positive virtues of this levy by constructive reform rather than the prevalent current practice of simply repeating complaints about its negative attributes (whether real or alleged).

The results of recasting the old question of property tax incidence in terms of the new view may not, in the end, be so startling as was at first thought by some. But this discussion has had the valuable result of emphasizing the need to look with scepticism on *all* pronouncements about the incidence of the property tax. In a sense, then, the principal message of this chapter is that the more certain someone sounds about the incidence of the property tax, the less he probably knows about it. Ignorance may well be bliss, but it is unlikely to prove a sound basis for public policy. Similarly, increased knowledge may complicate rather than simplify life, but it should not be rejected for this reason. This counsel may offer little reassurance to policy-makers groping for the ‘answer,’ but it is the only truthful way to conclude this account of the old, but as yet far from resolved, theoretical controversy about who pays the property tax.

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[25] In this connection, however, it should not be forgotten that the property tax is the only wealth tax most Canadians will ever pay, and that wealth, however imperfectly measured, is, it may be argued, at least as relevant an index of 'capacity' to pay taxes as current income (Bird, 1972). For one of the few official recognitions of this argument, see Commission on the Reform of Property Taxation (1977, 4). See also chapters five and seven below.

[26] This is obviously a controversial assertion: for a more extended argument along these lines, see Bird (1976d, part III).

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The incidence of the property tax: estimates

To date there have been at least ten quantitative studies of the incidence of the property tax in Canada. Five of these studies dealt with the property tax only (most with the residential property tax alone): one of these was for Manitoba only (Manitoba, 1975), one for Ontario, and two others were confined to a single city.[1] A fifth study (Johnson, 1967) dealt with only one province, Ontario, but covered all taxes. Finally, four studies, including two by the same author for different years (Gillespie, 1964, 1975; Goffman, 1962, and Maslove, 1972), covered all taxes for the country as a whole.[2] The most important characteristics of these studies with regard to the incidence of the residential property tax and their key results are presented in appendix B, along with those of a group of similar US studies, on which most of the Canadian studies appear to have been largely modelled.

The procedure followed in most of these studies was basically the same. First, and most important, certain assumptions are made regarding the incidence of the property tax. That is, these quantitative studies are *not* independent 'empirical' pictures of the incidence of the property tax; instead, they simply clothe particular theoretical assumptions in quantitative garb. Second, total tax payments are then generally allocated to the different income size classes in accordance with allocation bases (proxies) which are chosen to reflect the assumed incidence of the various parts of the property tax.[3] Finally, the taxes thus allocated are shown as a percentage of income by income size class. Corresponding to this procedure, then, there are three factors which affect the results of such studies: (1) the initial incidence assumptions, (2) the allocation basis chosen, and (3) the income concept employed.

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[1] Guelph, Ontario (Ministry of Treasury, 1972) and St. John's Newfoundland (Newfoundland, 1972). The Ontario provincial study of property tax incidence reported here is based on an unpublished study by the Ministry of Treasury (1976c): somewhat similar data appears in Commission for the Reform of Property Taxation (1977, 102). For an earlier review of most of these studies, see Bird and Slack (1976).

[2] One recent published study of tax incidence in Canada (Dodge, 1975) is omitted from this discussion because it provides no separate estimates for property taxes. The principal results of the most recent study by Gillespie have been published as Gillespie (1976), but the present discussion is based on the longer unpublished version of this material, cited as Gillespie (1975).

Some of these studies have made considerable efforts to gauge the sensitivity of their results to different income concepts. Clayton (1966), for example, used five different income concepts, and most of the others - except, interestingly enough, for the 'official' studies - have employed at least two such concepts. In sharp contrast to this open-mindedness about income concepts, however, these studies have shown almost no variations in either of the other two factors mentioned above.

The only important exceptions are the two studies by Gillespie (1964, 1975), which allow for different assumptions regarding the incidence of that portion of the tax which falls on improvements on rented residential property. Although the allocation of only about 15 per cent of total property tax payments in 1961 was affected by assuming that the tax on this portion of the tax base was borne by landlords rather than tenants, this change alone proved sufficient to make the property tax mildly progressive for income classes over $5000, although it was still quite regressive in the very lowest income classes (Gillespie, 1964, 207). This result points up the importance of the assumption that the tax on rented residential property is fully shifted to tenants in producing the regressivity demonstrated by the property tax as a whole in all of the studies surveyed here. No study to date has taken explicit account of the increasing empirical evidence from capitalization studies (see appendix A) which casts doubt on this assumption of full forward shifting, or of the theoretical arguments in chapter three which point in the same direction.

The variations in incidence shown in the studies summarized in appendix B are, on the whole, less significant than the overwhelmingly regressive incidence pattern which they appear to demonstrate quantitatively. As Maslove (1972, 75) puts it: 'Clearly the most regressive components of the overall tax system are those taxes levied by municipal governments. Foremost among these, of course, are the municipal property taxes.' The differences in the precise numbers shown in the various studies arise partly from the different data bases (year and place) used and partly from the different income concepts that they employ. With the sole exception noted above, there are no significant differences in the assumed incidence of the tax. In the most complete studies the tax on land is always assumed to rest on the landowner, but the taxes on improvements are assumed to rest on owners for owner-occupied residences and on tenants for rented residential property (and on consumers for farm and business property). In the 'official' studies, *all* taxes are assumed to be borne in proportion to the presumed consumption of housing services.

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[3] The principal exceptions are in the two Ministry of Treasury studies and the Manitoba study, which directly matched property taxes and income: see below.

Since the portion of the property tax assumed to fall on land in even the more careful studies is relatively small (ranging from 24 per cent in Maslove to 30 per cent in Gillespie) the estimated over-all incidence of the tax basically reflects the effect of these assumptions about the incidence of the tax on improvements. Since consumption expenditures (and especially expenditures on food and shelter) generally constitute a larger fraction of the current income of the poor than of the rich, the regressivity of the property tax demonstrated in these studies is, so to speak, fore-ordained by the choice of these incidence assumptions.

In short, all that studies such as those summarized in appendix B can do is to clothe in numerical dress the bare bones of an underlying theoretical model of the incidence of the property tax. In no sense do they constitute either a test of this model or an independent piece of evidence supporting it. To find out who *really* pays the property tax, one must, rather paradoxically perhaps, as a rule look not at data but at theory, as was done in chapter three. Nevertheless, it is still interesting to consider a little more closely what can be said about the quantitative dimensions of the incidence of the property tax in Ontario. This is the task of the balance of this chapter.

PREVIOUS INCIDENCE STUDIES IN ONTARIO

Four previous studies have been made of the incidence of the property tax in Ontario. Three of them have been summarized briefly in appendix B. The most thorough of these studies, that by Maslove (1972), is shown in Table 3. (Actually, since Maslove does not explicitly show these results in this detail for Ontario, Table 3 is really an estimate, based on his data and assumptions, of the incidence of the property tax in Ontario.) In view of the widespread currency given results such as these in current discussions about the property tax, it is perhaps worth looking more closely at exactly how they are obtained.

Maslove's procedure in making these estimates was first to assume that the land portion of the property tax (estimated at 24 per cent of total collections)

TABLE 3

Incidence of the municipal property tax in Ontario, 1969[1] (per cent)

Family money income class	Non-farm residential[2]	Non-residential	Total
Under $2000	10.4	4.4	14.8
2000-2999	5.6	2.9	8.5
3000-3999	4.5	2.8	7.3
4000-4999	3.6	2.5	6.1
5000-5999	3.1	2.0	5.1
6000-6999	2.9	2.2	5.1
7000-7999	2.9	1.8	4.7
8000-8999	2.7	2.1	4.8
9000-9999	2.8	1.9	4.7
10,000-10,999	2.7	1.7	4.4
11,000-11,999	2.3	1.7	4.0
12,000-14,999	2.2	1.6	3.8
15,000 and over	1.7	2.1	3.8
All classes	2.6	2.0	4.6

SOURCE: Calculated from data and assumptions in Maslove (1972).

NOTES:

1 'Full income' concept, that is, family money income (including transfer payments) plus certain imputed income items including the imputed rental value of owner-occupied dwellings: this is the relevant concept if government expenditures are taken as given.

2 It is assumed that the portion of the tax on rented residential property falling on land is borne entirely by residents of Ontario. This assumption results in a small overstatement of the actual incidence of the Ontario tax on Ontario residents.

rested on landowners, that the tax on owner-occupied residential property (39 per cent of the total, including 8 per cent for land) rested on homeowners, and that the remainder of the tax (28 per cent on business improvements, 3 per cent on farm improvements, and 14 per cent on rental residential improvements) was fully shifted forward.[4] The portion of the tax assumed to be paid by landlords was then allocated among income classes in accordance with 'other investment income,' a series derived from Statistics Canada (1969a), and including mainly real estate rentals and loan interest. The portion assumed to fall on tenants was allocated by rent payments, and that assumed to fall on homeowners was simply allocated in accordance with property taxes and assessments. Both of these items come from Statistics Canada (1969b). The property tax attributed to business improvements was allocated in proportion to all consumption expenditures and that on farm improvements in proportion to expenditures on food, with both distributive series also coming from Statistics Canada (1969b).

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[4] It is important to note that this breakdown of property tax revenues is highly arbitrary: as in earlier Canadian studies (Johnson, 1967, 31; Gillespie, 1964, 244) the only factual basis cited in support are assessment data from Ontario. As noted later, these data are in fact highly suspect as regards the breakdown between land and improvements. See also appendix C.

As Table 3 shows, these assumptions yield a regressive property tax in general, with the non-farm residential portion of the tax appearing particularly regressive. The non-residential portion of the tax, in contrast, appears to be close to proportional above the lowest income classes. All components of the property tax, however, are, on these assumptions, markedly regressive in the bottom two or three income classes.

The property tax as a whole appears to be more regressive in the Maslove study than in the earlier Johnson (1967) study for Ontario on 1961 data, which followed very similar procedures, but rather less regressive than in the Ontario government studies of the 1968 residential property tax in the city of Guelph and the 1975 tax in the province as a whole (see appendix B). The latter studies, however, followed a quite different methodological approach in two respects, both of which would be expected to make the residential property tax look more regressive. First, no distinction was made between the land and improvements portion of the tax on rented residential property. In other words, the *entire* property tax on rented residential property was assumed to fall on tenants.[5] As the ownership of land, like other forms of wealth, is presumably even more concentrated in the higher income classes than is income,[6] the result of this assumption is to make the effective tax rates by income class appear more regressive than they would otherwise be.

Another key departure in the official Ontario studies from the approach followed by Johnson and Maslove is that property taxes are related to gross income as reported on income tax returns. As most tax incidence studies emphasize, however, the use of unadjusted tax return data in incidence studies is very questionable: not only do problems arise owing to underreporting and non-

[5] The report of the Guelph study (Ministry of Treasury, 1972) does not state this assumption in so many words but this is clearly what was done. The study also extrapolates its results to 1972 but only the actual 1968 figures are referred to here. (The Guelph study also apparently includes a number of farm properties, which may account for some of the very high tax-income ratios noted below.) The unpublished Ontario study for 1975 (Ministry of Treasury, 1976c) assumes that the property tax burden on renters was equal to 20 per cent of rental payments.

[6] This is suggested, for example, by the 'other investment income' series (Maslove, 1972); see also Poduluk (1974).

reporting but, more importantly, there is no assurance that the income concept represented by these data is a particularly meaningful standard against which to measure tax incidence. (This question is further discussed in chapter five below.) Many transfer payments and forms of imputed income, for example, which clearly add to economic well-being, are not captured in this approach. The exclusion of most transfer payments for income reported on tax returns in itself suffices to explain the much more regressive results in the very lowest income classes found in the Ontario studies than in the Johnson or Maslove studies.

Unfortunately, none of the existing studies of Ontario attempts to separate the incidence of the residential property tax on owners and tenants. Interestingly, the only Canadian study which attempted to do this, for Manitoba in 1974 (see Table 6 below) suggests that the tax is substantially more regressive throughout the income range, but especially for the lowest income classes, for homeowners than for tenants. This result is not particularly significant, however, because it simply reflects the assumption in the Manitoba study that the property tax on tenants amounts to 20 per cent of the reported rent.[7] In contrast, the Guelph study, which is otherwise methodologically similar to the Manitoba study, directly related the *entire* property tax paid on rented residential properties to the reported income of the residents. Although recent US studies (Aaron, 1975, 35-8) suggest that under the traditional incidence assumptions, the property tax may indeed be a little more regressive for tenants than for homeowners, the question is, as shown earlier, a very complex one, and little general weight can be attached to this conclusion.

In 1970, 55 per cent of all Canadian families were estimated to own their homes (Poduluk, 1974, 209). As shown in Table 4, the incidence of homeownership in Ontario increases as income increases, so that the impact of a proportional tax on the market value of owner-occupied houses would be roughly progressive by income class, except in the unlikely circumstance that the absolute value of homes fell as income rose.[8] Since, as the second column in Table 4 suggests, the market value of owner-occupied homes probably tends to rise with income, unless assessed values fall considerably as a proportion of market values as market values rise, the incidence of a proportional property tax on owner-occupied houses would appear to be progressive with respect to income on the straightforward traditional assumptions. (This question is discussed further in chapter five.) Unfortunately, there are even less data relevant to the more complex question of the incidence of the tax on tenants, so nothing further can be said about this matter here.

[7] As noted above, an identical assumption was made in the most recent Ontario study (Ministry of Treasury, 1976c), although the incidence of the tax on owners and tenants was not calculated separately.

[8] See also the discussion in chapter five of the income elasticity of demand for housing.

TABLE 4

Homeownership in Ontario

Income class ($)	Per cent homeowners (Ontario, 1970)	Average market value of owner-occupied homes (Ontario, 1970 $)
Less than 3000	41.1	15,160
3000-4000	43.3	20,492
4000-5000	41.3	20,012
5000-6000	41.2	17,847
6000-7000	52.3	20,325
7000-8000	56.9	22,145
8000-9000	61.9	
9000-10,000	72.6	
10,000-11,000	65.6	24,477
11,000-12,000		
12,000-15,000	68.7	
Over 15,000	77.9	30,777

SOURCE: Unpublished data from Statistics Canada, Survey of Consumer Finances 1970, for a sample of 1477 homeowners (farm and non-farm, families and unattached individuals).

Before leaving the Guelph study, mention should be made of two respects in which it is definitely superior to the Maslove study or to most other attempts in Canada to estimate effective tax rates by income size classes. Both virtues arise from its use of individual rather than grouped data. One problem with the usual approach to quantitative incidence studies is that the average effective tax rate for any income class may hide great differences in the taxes paid by individuals. The importance of this phenomenon even in a single small urban area is clearly suggested in the Guelph study which showed an exceptionally wide dispersion of property taxes *within* each gross income class.[9]

In 1968, for example, there were 424 households shown in the Guelph study in which the principal income recipient had a reported gross income of between $10,000 and $12,000: 12 of these households paid property taxes of between $100 and $200, 61 between $200 and $300, 131 between $300 and $400, 124 between $400 and $500, and 1 paid over $900 (Ministry of Treasury, 1972, 34).

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[9] It should be noted that one reason why Guelph was chosen for this study was because it was the first Ontario municipality to complete the reassessment of property at market value which presumably meant that '... biases in the incidence pattern of property taxes due to discrepancies between assessment values and market values were kept to a minimum' (Ministry of Treasury, 1972, 14). Some implications of these biases are discussed in chapter one above.

The computed incidence of the property tax for those in this income class (assuming all were at the midpoint of both the income and the property tax class) thus ranged between from around 1.4 per cent to 8.6 per cent, compared to an average incidence for the class of 4 per cent. Similarly, the incidence of the tax in the $2500 to $3000 class (under the same assumptions) ranged from 1.8 per cent to 27.3 per cent,[10] and in the $20,000 to $25,000 class from 1.1 per cent to 5.6 per cent, although the averages for these classes were 10 and 3 per cent respectively. Given this degree of intraclass variation, it is hard to know what policy significance to attach to the average class figures. This point is discussed further in chapter five below.

A second interesting finding which emerges from the Guelph study is that the computed incidence of the property tax varies sharply with the *age* of the principal income recipient. While again there are very substantial variations in the position of different individuals with the same age and income, on the whole the property tax in 1968 appeared to constitute a larger proportion of reported income for taxpayers in the lowest income class *under* 65 than over. For those with higher incomes, however, the computed incidence of the tax was generally around the same (or sometimes a little higher) for the over-65 group. These results may perhaps seem a little surprising since, as one might expect, the average property tax paid by older taxpayers is generally higher in each income group. They apparently reflect the fact that although older taxpayers have, as one would expect, more wealth than younger taxpayers (Poduluk, 1974), they tend also to have higher than average incomes in each income group. The importance of the age factor in Canadian redistributive policy is discussed further in chapters five and seven below.

ALTERNATIVE ESTIMATES OF RESIDENTIAL PROPERTY TAX INCIDENCE

The purpose of this section is to determine the sensitivity of incidence estimates for the Ontario residential property tax to alternative assumptions along the lines sketched in chapter three on incidence theory. Five basic incidence assumptions derived from this earlier discussion are used in constructing these estimates. The cases considered are the following.

Case 1: (*a*) taxes on residential owner-occupied dwellings are borne by homeowners. (*b*) taxes on the land portion of rented residential properties are borne by the owner. (*c*) taxes on the improvements portion of rental residential properties are fully shifted forward to tenants.

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[10] Actually, the property tax came to 100 per cent of 'income' for at least one taxpayer in the lowest (under $2500) income class.

Case 2: (*a*) and (*b*) same as in case 1. (*c*) taxes on the improvements portion of rented residential properties are half shifted to tenants and half borne by owners.
Case 3: (*a*) same as in case 1. (*b*) and (*c*) all taxes on rented residential properties are borne by owners.
Case 4: (*a*) (i) taxes on the land portion of owner-occupied residential properties are borne by the homeowner; (ii) taxes on the improvements portion of owner-occupied property are borne by owners of capital in general. (*b*) taxes on the land portion of rented properties are borne by owners. (*c*) taxes on the improvements portion of rented properties are borne by owners of capital in general.
Case 5: (*a*), (*b*), and (*c*) all taxes are borne by the owners of capital in general.

Case 1 is, of course, intended to represent the strong version of traditional incidence analysis followed by Maslove and most of the studies summarized in appendix B. Cases 2 and 3 represent two variations of the traditional approach which were employed by Gillespie (1964), apparently to capture the consequences if the demand for rental space is not completely inelastic.[11] As noted earlier, with Gillespie's 1961 data both cases 2 and 3 resulted in mild progressivity at the top of the income distribution (over $7000 for case 2 and $5000 for case 3), but both actually *added* slightly to the measured regressivity in the income classes under $3000 (Gillespie, 1964, 65-9). Finally, cases 4 and 5 represent two versions of the new view of property tax incidence outlined in chapter three. Case 5 is the extreme version, assuming that all the property tax is borne by owners of capital through changes in the average rate of return, while case 4 assumes that the land portion of the taxes on all residential properties is borne by the owners.[12] The only previous study which appears to have allowed for these two variants, on 1966 US data, found that case 5 gave a more regressive picture of the incidence of the property tax as a whole than case 4 (Aaron, 1975, 47).

Table 5 and Figure 1 present the results of applying these five sets of incidence assumptions to 1969 Ontario data: the details of this exercise are set out in appendix C. The over-all impression from this exercise is as follows: on the traditional assumptions (case 1) and the modified traditional assumptions (cases 2 and 3) the residential property tax appears to be strongly regressive in the lower income classes, say, below $6000 or so. The modified traditional assumptions, however, suggest that the tax is roughly proportional (case 2) or mildly progressive thereafter. In contrast, the new view of property tax incidence (cases 4 and

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[11] The usual analysis (Netzer, 1966, 36-7) would in fact appear to stress more the elasticity of supply than the inelasticity of demand stressed by Gillespie (1964, 55). Interestingly, Gillespie (1975) did not employ case 3.

[12] A more accurate depiction of the new view would actually distribute only the basic average property tax in proportion to capital ownership – and not even that if capital is internationally mobile (see chapter three) – and deviations from this average in accordance with the relevant elasticities (McLure, 1976).

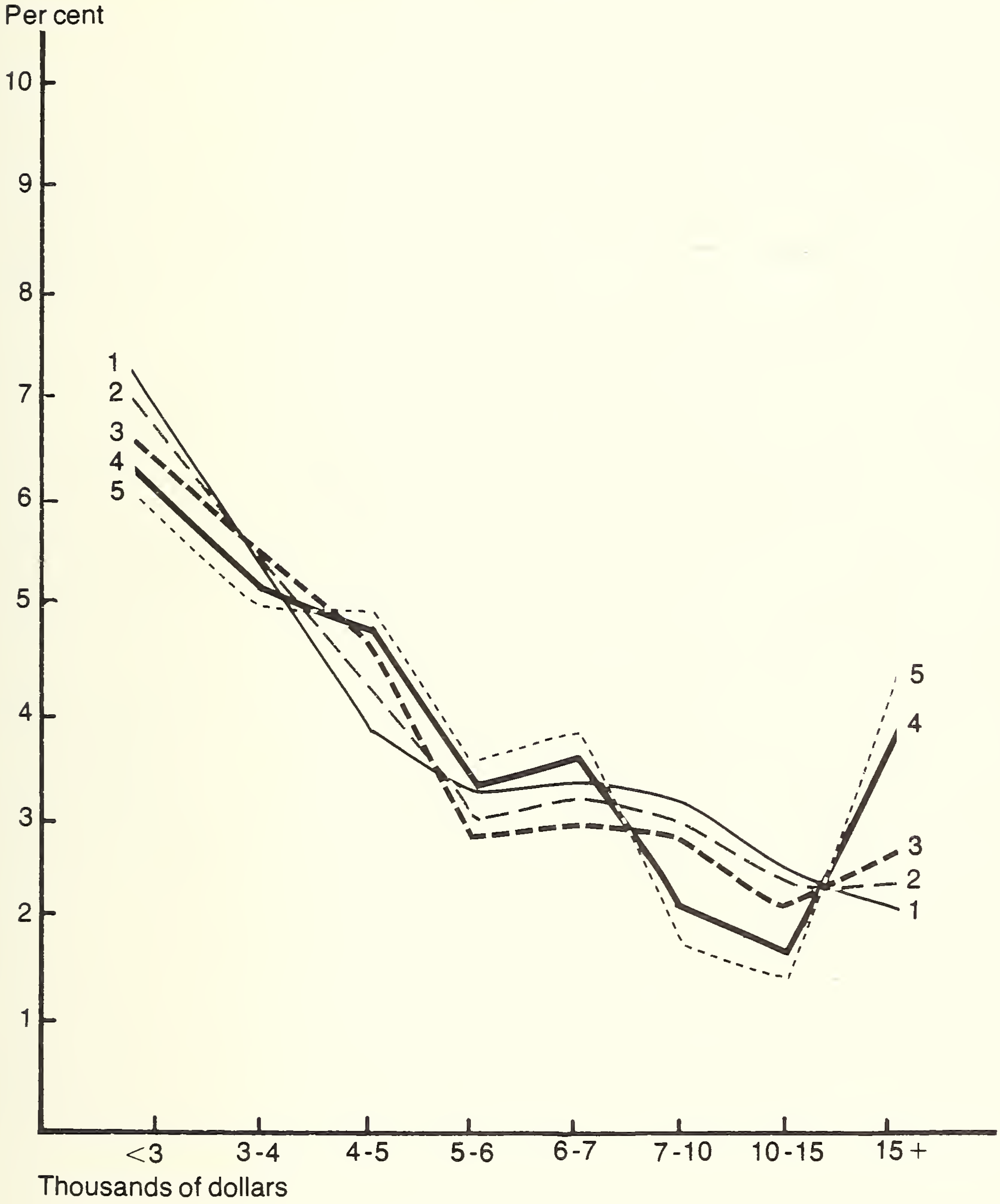
TABLE 5

Residential property taxes as a percentage of income under various assumptions (Ontario, 1969)

Assumptions	Under 3000	3000-3999	4000-4999	5000-5999	6000-6999	7000-9999	10,000-14,999	Over 15,000	All classes
Case 1	6.9	5.3	3.8	3.1	3.3	3.1	2.4	2.1	2.8
Case 2	6.7	5.3	4.2	3.0	3.1	2.9	2.3	2.3	2.8
Case 3	6.6	5.4	4.6	2.8	2.9	2.8	2.1	2.6	2.8
Case 4	6.1	5.2	4.8	3.3	3.6	2.1	1.7	3.7	2.8
Case 5	5.9	5.1	4.9	3.5	3.8	1.8	1.5	4.0	2.8

SOURCE: Appendix C.

Figure 1
Residential property taxes as a percentage of income (Ontario, 1969). Source: Table 5



5) suggests that the tax is clearly progressive for incomes of over $12,000 or so and perhaps very roughly proportional for incomes between, say, $6000 and $12,000. Even on these 'new' assumptions, however, the tax still appears to be regressive in the lowest income classes.

These crude estimates could obviously be substantially refined and improved in many respects.[13] Nevertheless, two points appear to emerge clearly enough to deserve explicit mention here. The first is that, as stated earlier, the assumptions clearly predetermine the results: the property tax is, broadly speaking, regressive throughout on the traditional assumptions but progressive at least for the higher incomes on the new assumptions.[14]

The second conclusion, however, is that the available Canadian data make the tax look regressive in the lower income ranges under *any* assumptions, in contrast to the apparent situation as depicted in some recent US estimates (see appendix B).[15] While it is not clear to what extent these results reflect the inadequacy of Canadian data, especially the lack of any reliable estimates of effective tax rates and the other data problems noted in chapter five, they should make even the boldest advocates of the new view a little more cautious in Canada than they have sometimes been in the United States.

Too much should not be made of any of these conclusions, however, owing to the many conceptual and statistical problems with *all* such quantitative incidence exercises as well as the problems with the basic theory discussed in chapter three above. The next chapter concludes this discussion of the incidence of the property tax by reviewing some of these problems and summing up where all this leaves us.

[13] A similar exercise was carried out for 1973; as the conclusions were similar, however, and the statistical basis for them much shakier, these results are not reported here. The 1969 data in Maslove (1972) were also reworked using the five sets of assumptions set out above and yielded results almost identical to those based on appendix C – which is not too surprising since essentially the same Statistics Canada data were used in both.

[14] One might perhaps speculate that if the income series were extended to include classes as high as $92,000, as in the US data depicted in Figure B1, the picture in Figure 1 might perhaps resemble that shown in Figure B1 more closely. Even as it is, it is worth noting that case 5 (the unmodified new view) in Figure 1 crosses case 1 (the unmodified old view) around the $15,000 mark, which, given the generally higher level of US incomes, compares very closely to the crossing point of the similar cases (C and D respectively) in Figure B1. (Although Figure B1 relates to *all* property taxes, somewhat similar results have been calculated for the housing portion of the tax alone in Musgrave, 1974, 227.)

[15] But note Ladd (1973) has results in the lower income ranges similar to those shown in Table 5: see Table B5.

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The incidence of the property tax: conclusions

All quantitative studies of tax incidence of the sort presented in chapter four are open to many criticisms. In addition, quantitative studies of the incidence of the real property tax give rise to their own peculiar problems. This chapter reviews some of these criticisms and concludes that the value of all such incidence exercises is very suspect. It concludes by summarizing the little that can be said with much confidence about the incidence of the Ontario property tax - and suggests that the fact that little reliance can be placed on any quantitative incidence estimates is, however, not nearly as damaging a blow to the determination of appropriate tax policy as some might think.

A GENERAL CRITIQUE OF INCIDENCE STUDIES

To begin at the beginning, all incidence studies essentially allocate tax payments to income classes.[1] The resulting incidence pattern therefore depends very much upon the concept of income which is used. Previous Canadian studies have of course been well aware of this problem. Maslove, for example, specified three income concepts: (1) family money income, (2) full income, and (3) broad income.[2] His 'preferred' concept was 'broad income' which equals 'full income' minus transfer payments. This concept was preferred because '... it approximates what income would be before taxes and before government expenditures' (Maslove, 1972, 12). 'Full income,' the sum of family money income plus certain imputed components, was considered theoretically invalid because 'it is neither a purely pre- or post-government concept,' but it was nevertheless used as an alternative base, first, because 'transfer payments are commonly included as part of their income flows by recipients,' and, secondly, because 'it becomes relevant if one regards expenditures as given and concentrates attention on the differential incidence patterns of various financing schemes' (Maslove, 1972, 11).[3] Family money income, although admittedly 'the concept that would be familiar to most families,' was not even considered as a base and was, as noted earlier, simply used to derive the income classes used.

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[1] Some of this section derives from an earlier consideration of these issues in a quite different context: see Bird and DeWulf (1973) and DeWulf (1975).

[2] Although the two other leading Canadian published studies, by Gillespie (1964, 6-11) and Johnson (1967, 8-10) differ in some respects because they treat expenditures as well as taxes, they follow a generally similar line: Maslove's argument is treated in more detail here simply because his estimates for Ontario were presented earlier.

Three criteria governing this choice of income concepts are stated in the Maslove study. The first is that the concept should represent a *permanent* flow of services so that it can be taken to reflect the stock of wealth comprehensively defined, which he considered to be the broadest measure of 'ability to pay.'[4] A second, related, criterion is that the income concept should be *comprehensive*, including all types of income (monetary and non-monetary, realized and accrued). Finally, the income concept should be *consistent* in how it treats government: as Maslove (1972, 9) puts it, 'Should incidence be measured by imposing the effect of government on a situation which would exist without it (pre-government income) or by removing the government sector from an existing state (post-government income)'? Because the very formulation of this question strikingly demonstrates the principal conceptual problem with general incidence studies, discussion of it is postponed until later in this chapter. The first two criteria, and in particular the way in which they are handled in the Maslove study, provide sufficient food for thought in themselves.

In the first place, these criteria make it clear that the desired base for incidence studies is a *welfare* concept which need have nothing to do with what the man in the street – and most Canadian politicians – considers to be 'income' (that is, more or less the 'family money income' concept.).[5] Although this approach is quite consistent with the traditional public finance approach to defining income for tax purposes, as epitomized in Royal Commission on Taxation (1966), the resulting incidence estimates may in principle bear little relation to the popular *perception* of tax burdens, as already noted in chapter two. This important point is developed further below with particular respect to the incidence of the property tax.

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[3] Maslove's 'full income' rather than 'broad income' estimates were reported in Table 3 largely because precisely the two reasons cited in the text make this concept more relevant than the broad income basis that he himself preferred (see later text criticism).

[4] The many problems with *any* 'ability' measures are left aside here in the interests of simplicity, although it is later suggested that a unidimensional measure such as income is likely to be less satisfactory than a multidimensional approach including wealth as a separate measure.

[5] See also appendix C on this concept. Only Johnson (1967, 8) notes in passing that an argument in favour of using the money income concept is that people can understand it. See also Maslove's remark, cited earlier, to the effect that transfer payments are considered as income by recipients – and not only by them, one might add.

Another striking feature of Maslove's study is that, while he does make various attempts to derive a broader income concept, he makes no attempt at all to establish any kind of permanent income basis, as his theoretical argument (including a citation of Friedman, 1957) suggests he should have done. That this point is far from trivial is shown by Mayer's recent (1974) recomputation of a similar US study, assuming two alternative formulations of a permanent income basis. The result of these calculations was that the burden of the tax system as a whole turned out to be significantly more progressive than it originally appeared, as one might expect in view of the high transitory component in the lowest income classes.[6]

So far as the adjustments actually made to money income are concerned, however, there is little fault to find in detail with Maslove's procedures except for the omission of accrued capital gains, which, as Gillespie (1964, 7) recognized, should be included. This omission biases the estimates in Table 3 in the direction of showing greater progressivity in the highest income class than would exist if gains were included in the measured base, as they should clearly be in terms of his own criteria. This point is worth mentioning not just because the line as to what is included in the income concept has been drawn at an inappropriate place – lines must always be drawn somewhere – but mainly to emphasize the importance of explicitly noting the biases introduced in the final estimates by the point at which the line is drawn.[7]

A more obvious example of the same problem is the treatment of transfer payments. As noted above, Maslove's preferred formulation of 'broad income' excludes such transfers.[8] The clearest result of this omission is of course to overstate the effective tax burden of the lower income classes, as indeed he notes (p. 72) when commenting on the nonsensical tax rates of over 100 per cent

[6] One would expect the transitory component to be large in the highest income classes also, but the lack of detail on these classes in the Mayer study (as in most) obscures any effects this might have on the results. Mayer's recalculated estimates, of course, are still subject to all the other ills attributed to such studies in the text discussion.

[7] In fact, Maslove (1972, 78) does note this particular point in the final paragraphs of his study.

[8] Curiously, although Maslove notes on p. 9 that a 'pre-government' concept requires the removal of all transfer payments *and* all benefits of public expenditures, on p. 12 he asserts that simply removing transfer payments 'approximates what income would be before taxes and before government expenditures.' This is clearly wrong.

calculated on the ‘broad income’ basis for the lowest income classes. Even so, his incidence estimates on the ‘broad income’ basis imply that the lowest income class in Ontario paid well over half of its ‘income’ to the government in the form of taxes, with the single most important cause of this astounding state of affairs being the municipal property tax (Maslove, 1972, 120).

Estimates such as these, however, call into question the estimating technique used at least as much as they do the ‘fairness’ of the tax structure. It is, for example, far from clear that *any* of the income measures used in studies such as this adequately reflects the ‘welfare’ or ‘ability’ with which they are primarily concerned (Bentzel, 1970).

In particular, so far as the property tax is concerned, it is far from clear why the appropriate standard against which to assess the equity of the tax is *income*, no matter how it is defined. As Gaffney (1972, 423) has stressed; ‘In effect this means we judge the property tax on the basis of how closely it resembles the income tax ... since nothing resembles the income tax so much as the income tax, the property tax looks inferior.’[9] Gaffney goes on to assert that the property tax really has a quite independent rationale, as a levy on particular forms of non-human wealth, and that its equitableness should be judged by how closely it accords with that rationale. Finally, he suggests that, apart from administrative problems, the odds are high that the real property tax is in fact quite progressive in terms of the relationship between who pays it and the distribution of wealth. This line of reasoning received some tenuous support, at least in the case of homeowners, in the discussion earlier of Table 4.

This line of argument – like the somewhat similar arguments occasionally made about death taxes (Jantscher, 1968; Bird, 1972) and consumption taxes (Shibata, 1968; Kaldor, 1955) – will not convert ‘income fundamentalists’ of the pure Simons-Carter variety who take income (comprehensively defined) as the only conceivably relevant measure of ‘ability.’ But it should not simply be dismissed out of hand, as is usually done in practice when the ‘fairness’ of taxes is judged in relation to income and only income. Incidence measured in terms of wealth may be different than that measured in terms of income, and there is no overwhelming case in principle for choosing one basis rather than another. Indeed, given the imperfections in practice of any one measure, there may well be a good case for making use of several different tax bases on equity grounds alone.[10]

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[9] A similar caveat against the propensity of economists to use ‘income’ as the only conceivable standard for judging the distributional effects of taxes is voiced by Wertz (1976). Traces of a similar argument may perhaps be detected also in Commission on the Reform of Property Taxation (1977, 46).

[10] This case does not, however, rest on the crude idea that ‘all should contribute in some

Even the most determined believer in income as the sole correct measure of ability has a serious problem, of course, in deciding *what* income concept to use. As the argument cited above from Maslove suggests, for example, many economists think the correct income standard against which to measure tax incidence is some version of permanent or life-cycle income rather than annual current income - the sort of number obtainable in most primary data sources. The trouble with the annual concept is that it completely misses the important time dimension of income distribution. The fact that taxpaying units tend to pass through different income size classes during their life cycle is thus, in principle, highly relevant in assessing the equitableness of the tax structure.[11]

Two recent studies emphasize the importance of this point (as did the Mayer (1974) study cited earlier with regard to permanent income). Paglin (1975, 603) in a suggested revision of the usual income distribution measures argues that a considerable amount of the measured income inequality 'is simply a function of the diversity in the ages and size of families, and the lifetime income pattern typical of a technically advanced society. Such inequality,' he asserts, 'does not represent a limitation on lifetime opportunities, nor is it a quintessential evil to be obliterated if our society is to be considered just and humane.' In particular, his recalculations suggested that the low percentage of income allotted to the bottom income groups would be significantly increased when adjusted for the age-income profile. Although Paglin's arguments have been shown to be incorrect and exaggerated (see Health and Welfare Canada, 1977), some truth remains in this argument: the implication for tax incidence studies is, of course, that some of the measured regressivity of the tax system captured by any particular cross-sectional snapshot of incomes has less 'real' equity relevance than is usually thought - though, as noted later, it may still have great *political* relevance.

This point has been brought out even more clearly in a quite different paper by Polinsky (1973), in which he shows that 'the equalizing effects of a tax structure on annual incomes for a given year may be very different from the same tax structure's effect on lifetime incomes' and concludes that 'to evaluate any progression policy solely on the basis of its effective incidence may be to miss its essence.' In particular, as Atkinson (1971) has noted, analysis of taxes on wealth

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measure' (Commission on the Reform of Property Taxation, 1977, 95): for more subtle expositions of the case for multidimensional 'indexes' of welfare, see the references earlier in this paragraph.

[11] The age-related nature of the income distribution in Ontario in 1973 (based, it is true, on cross-section data) appears in the unpublished Ministry of Treasury (1976c) study, which suggests that average household income rises steadily with the age of the head of the household to a peak at around age 44 and then declines. For a recent useful survey and appraisal of this and other issues concerning income distribution data in Canada, see Health and Welfare Canada (1977).

should in principle be based on a concept of lifetime equity even if the relevant equity standard is an income standard.

While some may think a lifetime too long a period to be relevant for any equity concept,[12] there thus seems to be even more reason to think that the instantaneous equity notion implied in using any single year as a base against which to assess tax equity is too short a period. This is especially true with regard to wealth taxes. A wealth tax may, for example, display a regressive incidence pattern in terms of current income but, by altering the pattern of asset-holding, it may have a quite different effect on the lifetime distribution of income. In short, while the 'right' period to use depends on the purpose of the study, the general conclusion reached by many analysts is that 'the longer the period over which income is measured the less likely it is to give a misleading picture of the family's economic circumstances' (Aaron, 1975, 28).

This argument is particularly important with respect to the property tax because 'housing expenditures ordinarily are shaped by income averaged over a period considerably longer than one year' (Aaron, 1975, 29). The point here, of course, is again simply that some longer-term concept of income is a better measure of *present* 'ability to pay' than is present income. This argument appears quite conclusive in favour of the use of such an income concept, which would of course tend to reduce the apparent regressivity of the residential property tax in the lower ranges of income owing to the large numbers of low-income people who in the past (or future) have had (or will have) higher incomes and whose expenditure patterns are thus not closely related to current income patterns.[13]

The relevance of the current income measure with particular respect to housing has recently been vigorously reasserted by Netzer (1973), however, who argues that *current* income in fact provides a better guide to tax policy.[14] The argument he makes is basically the commonsense one – noted earlier as in effect the view of the proverbial man-in-the-street – that policy must focus on what *is*, not on what was or what may be. If the absolute level of the property tax is perceived to work a hardship on the poor (particularly poor elderly homeowners),

[12] The Royal Commission on Taxation (1966), for example, explicitly rejected the lifetime concept: but see Vickrey (1972) for a strong defence. The careful discussion of this issue in Health and Welfare Canada (1977) is not too favourable to its welfare relevance but does suggest allowing for at least some time-profile adjustment.

[13] As noted earlier, although the higher income ranges are also unreliably depicted in the usual measurement, the effects of a change in income concept would appear less marked there because of the much lesser detail in the data.

[14] Netzer (1973) has also made the interesting, and correct, observation that the use of a long-term income standard implies that one should also consider long-term supply adjustments, that is, generally allow for more forward-shifting of the tax on rented property to tenants (see chapter three).

then steps must be taken to relieve this burden, whether it is really a 'burden' in some esoteric economic sense or not. Several interesting hares are started by this line of reasoning.

In the first place, if the 'correct' equity concept is some longer-term measurement of income, what is called for in the face of short-run 'hardship' appears to be not relief for all time but some sort of averaging scheme which permits the adjustment of current tax liabilities to current income. This points to tax deferral of some sort, rather than tax forgiveness, as the appropriate form of property tax relief (Aaron, 1975, 77-9). Ontario already has such schemes in limited form for both farmers and the elderly, as noted in chapter six. As also noted there, however, these deferral schemes appear to be singularly unpopular with those they are supposed to help, which perhaps suggests that this solution does not in fact satisfy the common conception of the problem.

Secondly, however, if this concern with current liquidity problems – the fear that 'the absolute level of the tax worked a hardship on some persons' (Advisory Commission, 1975b, 16) – is really an accurate reflection of the fact that 'taxation and transfer programs in this country generally are based on current income ...'[15] we are led back to the point mentioned earlier about the use of the 'popular' rather than the 'academic' concept of equity as the relevant standard of comparison.

From this perspective what matters in assessing the equitableness of a tax is not what its incidence is estimated to be by scholars using the most refined possible techniques, but rather what people (and policy-makers) perceive it to be. This *subjective* conception of the burden of the tax system is likely to look rather different from that which emerges from the usual 'objective' studies of tax incidence, as was noted in chapter two. Furthermore, the evidence suggests that the latter have so far had surprisingly little influence on the former – except, of course, when they confirm popular prejudices.[16]

In both these respects, the property tax appears to be something of a special case, first, because homeowners everywhere dislike it as an obviously arbitrary and usually obvious levy – and, second, because academic research has, until recently, generally agreed with the common attitude and, indeed, helped to extend the 'knowledge' of the tax's regressivity to tenants. People are generally aware of the property tax; people also generally do not like taxes, and they particularly dislike large taxes of which they are aware; they have also been told

[15] Advisory Commission (1975b, 15). Much the same statement may, of course, be made for Canada: see, for example, Bird and Bucovetsky (1976).

[16] These comments reflect, in part, earlier reflections on this subject in Bird (1970a) and Bird and DeWulf (1973, 668-9).

for years that this particular tax is a bad one. In these circumstances it is not at all surprising that they believe what they are told and are happy to use all available quantitative estimates to support their belief.

How else can one explain the fact that economists' estimates of the incidence of the property tax are taken as gospel while their estimates of the incidence of the corporate income tax and the payroll tax are universally ignored? Not only are the theories underlying the latter estimates at least as good (or better) than those on property tax incidence, but the calibre of the empirical work is much higher[17] and the results of the studies generally no more conflicting in direction. Yet what government hesitates to raise payroll taxes because some economists say the tax is highly regressive? On the contrary, 'fiscal illusion' works in favour of these taxes and so they are continually creeping up (Bird, 1976d, chap. 16). Similarly, no government appears to pay much attention to the never-ending academic squabbles about the incidence of the corporate income tax, although in this case the popular illusion (if such it is) that corporations pay the tax is offset politically to at least some extent by the similar belief of corporations. The essential point here is simply that *either* the subjective approach to tax policy matters *or* it does not.

In fact, there would appear to be a good deal of merit in adopting the 'popular' approach of focusing on short-run tax impacts on current money income as being the most policy-relevant approach. The main practical implication of this approach is that the only 'serious' incidence problem with the property tax is for elderly homeowners. The longer-run academic approach leads one to worry less about the elderly homeowner and more about the poor tenant, but it also reduces the apparent regressivity of the tax a great deal anyway, especially if it is assumed either that the 'life cycle' theory of assessment holds or that assessment biases will be removed.[18] In either case, no simple answer emerges – but

[17] In fact, apart from the tax capitalization studies (see appendix A), there has really been no empirical work on property tax incidence at all comparable to that on payroll taxes and corporate taxes.

[18] The 'life-cycle' theory of assessment goes roughly as follows. Most families start out their independent lives in rented accommodation, but in time move into their own homes. Over-taxation of apartments in the early years is thus compensated for by under-taxation of single-family houses in later years. This rationalization of some of the assessment biases noted in chapter one is particularly fascinating for the support it offers to the contention that life-cycle or permanent income is a more appropriate income standard by which to judge property tax equity than current income. It is also not a bad description of the housing consumption pattern of many people, even today. Increasingly, however, apartment living is becoming a permanent condition of life, particularly for the poor and particularly in metropolitan areas. This kind of thinking therefore, has little relevance for an increasing number of lower-income metropolitan residents – though it might well be argued that these people as yet do not carry very much political weight in Ontario.

there seems no reason for great public concern with the incidence of the property tax in general, that is, apart from these particular problems at the lower end of the (current) income distribution.

Two other problems with all quantitative incidence studies may now be dealt with much more briefly. The first, already noted briefly in chapter four in connection with the Guelph study, is that such studies often conceal more than they reveal, simply because intraclass variations may be much greater than interclass variations. As Lester Thurow (1975, 190) recently noted: 'Given this dispersion in results within each income class, the pattern of mean incidence is not terribly interesting or important ... The tax system is both progressive and regressive' (see also Wertz, 1976). While in an absolute sense this problem is perhaps greatest in the higher income ranges, at least when the limit of the upper income class is set as low as in all Canadian incidence studies, in a more important sense any given absolute amount of horizontal inequity is a much more serious concern at the lower end of the income range (Shoup, 1969, 44-7). An inequitably distributed tax dollar presumably carries a larger social cost when it affects a poor man.

This point is particularly significant if the deviations from the class mean are associated with characteristics other than income which are policy-relevant. The most important such characteristic in terms of Canadian distributional objectives is clearly, on the evidence, age (Bird, 1976d, chaps. 15-16). As indicated earlier, age is also strongly associated with the ownership of assets, and hence with property taxes (Poduluk, 1974). In other words, the fact that those poor people who, on some assumptions, bear the heaviest property tax burden are old may make their case for relief less convincing from an 'academic' equity perspective, as argued above, but it likely makes it much *stronger* so far as the Canadian policy process is concerned.[19]

Another very relevant characteristic from this point of view might be tenurial status. Although neither the economic nor the political implications are quite as clear, there is probably some presumption that the political process in Canada favours homeowners both for political and philosophical reasons (see chapter two).

This line of thought suggests, of course, that the relevant divisions of the population so far as distributive policy are concerned are not so much income as age, homeownership, and (of course, in Canada) location. Incidence studies of the presumed impact of the property tax (and of relief measures) by these categories may well be more policy-relevant than the conventional approach by income size classes: chapter seven therefore presents some information along these lines for the property tax credit.

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[19] One of the most interesting aspects of the report of the Commission on the Reform of Property Taxation (1977, 95-6) is its strong argument that age *per se* is not a relevant factor in appraising the appropriate 'burden' of property taxes: as noted in chapter seven below, it remains to be seen what effect, if any, this argument will have in the face of such long-entrenched practice to the contrary.

The final, and in some ways the most devastating, problem with all quantitative incidence studies is reflected in Maslove's question cited earlier: 'Should incidence be measured by imposing the effect of government on a situation which would exist without it or by removing the government sector from an existing state?' The short answer is that *neither* is possible in principle.

All studies of the incidence of broad-based taxes (including the property tax) are thus in a sense necessarily based on a fundamentally untrue assumption.[20] As Shoup (1969, 11) puts this argument: 'The distribution of total burden under any tax system is an invalid concept; it assumes what is either untrue or meaningless, namely, that the existing distribution of income-before-tax would remain unaltered if the tax system did not exist.' Thurow (1975, 187) agrees: 'The basic problem with tax incidence is that it attempts to undertake a type of analysis that is both empirically difficult and theoretically impossible.'

What does it mean to be told, for example, that Ontario families with less than $2000 in money income in 1969 paid (on average) almost 15 per cent of their 'full income' in property taxes? (Maslove, 1972, 120). It cannot really mean anything much in absolute terms unless one is prepared to make the strong and surely untenable assumption that removal of the property tax (or its replacement by another tax) would not affect resource allocation.[21]

SPECIFIC PROBLEMS WITH PROPERTY TAX INCIDENCE STUDIES

In addition to such general problems with all incidence studies of broad-based taxes, there are other problems more specifically related to attempts to dress up

[20] By far the clearest recognition of this problem in any Canadian study is in Dodge (1975, 7) who notes that his estimates are 'highly suspect' because they rest on the invalid assumption that there will be no behavioural changes. He further stresses that all that can really be measured are the distributional effects of very small changes. We fully agree with both these points.

[21] A separate question concerns the appropriate incidence concept with which to approach property tax incidence questions. Most studies employ the differential incidence concept and simply do not consider many of the questions considered here. (In fact, contrary to what many seem to believe, the differential incidence concept does not avoid any of these problems, as DeWulf (1975) makes clear.) As noted in chapter two, however, the property tax can really only be considered as part of the local government system as a whole, which suggests that its incidence should not be considered separately from the incidence of the services it finances (balanced-budget incidence). This point is not pursued further here, however.

different theories about the incidence of the property tax in quantitative garb. Some of these were touched on in earlier discussion, but it is useful to bring them together in one place and to elaborate their implications for incidence studies. The simplest part of the traditional approach to property tax incidence, for example, concerns the tax on land. Although it is noteworthy that the distinction between the land and the improvements portion of the tax on residential property has been completely ignored in the most recent official studies, with the result that these studies almost certainly overstate the regressivity of the tax on rented residential property on even the strongest traditional assumptions, most Canadian quantitative incidence studies have attempted to separate these two components.

These attempts at separation have been exceptionally crude, however. To the extent that they have any factual basis, they appear to derive from the land-improvement split shown in earlier Ontario assessment data.[22] Gaffney (1972), drawing on recent US studies, has argued strongly that assessment practices generally tend to understate substantially the share of land in property value. He places this share in the US at 40 per cent or higher and argues further that the share tends to rise with the value of holdings. He noted, however, that the land share is probably lowest in owner-occupied residential property. To the extent that these trends hold true in Canada, the incidence of the tax would appear to be more progressive than it looks in the usual analysis.

The only Canadian evidence bearing on this point that we have found deals with the effect of market value reassessment in Mississauga in 1969 (Bureau of Municipal Research, 1970). One of the outstanding results of this reassessment was a very substantial increase in the land share from 25 per cent to 52 per cent – a result very comparable to that noted by Gaffney (1972) for various US jurisdictions. For residential properties alone, the increase in the land portion of the assessment ranged from about 31 times for older single-family and semi-detached residences, to 21 times for newer ones and 13 times for apartment buildings.[23] Although land did indeed constitute a smaller share of total value for residential than for non-residential property, the 'correct' land share may be calculated from these figures at 37 per cent for newer single-family and semi-detached homes (instead of the previous 12 per cent), 49 per cent for older houses (instead of 14 per cent), and in the vicinity of 30 per cent for apartments (instead of 14 per cent).

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[22] See appendix C. Goffman (1962) simply assumed the same land share for Canada as had Musgrave (1951) for the US. Gillespie (1964) used data from various official sources and a 'healthy degree of personal judgement' to arrive at a land share of 25 per cent. Johnson (1967) used data from the Ontario Department of Municipal Affairs to derive a share of 27 per cent. Maslove (1972) referred to all his predecessors and some published Ontario data to derive a land share of 24 per cent. Finally, Gillespie (1975) assumed a land share of 30 per cent.

[23] Bureau of Municipal Research (1970, 22) shows an increase of only 4 times for the land portion of apartment property, but this figure is clearly inconsistent with the rest of the table.

While there was of course some variation in these shifts from property to property, and land values had probably risen more quickly in Mississauga than in many other areas, it thus seems obvious that previous Canadian studies have likely assumed too low a land share even for residential properties. As it happens, however, the discrepancy is least for the apartment buildings which presumably constitute the bulk of the rented residential property for which variations in the share of the tax assumed to fall on land may significantly affect the results (under the traditional assumptions). Even so, if the sort of understatement of land values shown in these Mississauga figures can be extrapolated to the rest of the province, as various official statements imply, it appears that the inherent regressivity of the property tax on rental residential property has been somewhat exaggerated in earlier studies.[24]

Another problem concerning the treatment of that portion of the tax assumed to fall on land is conceptually more complex, as well as potentially more important in affecting the quantitative results, since it affects the entire land part of the residential property tax and not just that related to rented property. Even the simplest traditional approach to property tax incidence does not imply that the tax on land should be allocated in proportion to the *present* ownership of land, as is done in all Canadian studies. On the contrary, if the supply of land is fixed, as is usually assumed, present landowners bear only those increases in property taxes which have been imposed since they obtained the property. All earlier taxes were wholly (or partly, depending on a number of factors) capitalized.

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24 In principle, the new Ontario assessment system does not distinguish between the value of the land and the value of improvements. Instead, it is asserted, and quite correctly in theory, that the market value of a property reflects the value of the property as a whole and not that of these two different components. In line with this theory, separate values are no longer published for land and improvements. Even the tenuous quantitative basis of earlier studies has thus vanished. Nevertheless, accurate studies of property tax incidence in the traditional vein clearly *require* the separation of these two components, so long as they are presumed to represent factors with different supply characteristics. Studies which, like the Guelph study, do not make such a separation are in effect assuming that residential land is in perfectly elastic supply in the short run. While, as noted in chapter three, the usual assumption of a perfectly inelastic supply of land is overdone, it clearly has much more merit in both principle and practice than its contrary.

To the extent that past land taxes have been capitalized, it may, as Aaron (1975, 23) has suggested, make more sense to allocate land taxes in proportion to the ownership of capital in general rather than present land ownership alone.[25] He does not, however, really provide any rationale for allocating the capitalized tax to *all* owners of capital, and there seems little reason why this should be done.

In the first place, if the tax was actually capitalized in the past, there is by definition no burden to be allocated to anyone anyway since the taxes presently being paid over to the government were 'really' paid by previous owners in the form of a sort of capital levy. (Parenthetically, this statement exemplifies the kernel of reality in the dictum that 'an old tax is a good tax.') As Seligman (1927, 5) put it long ago, 'If a tax is shifted, it cannot be capitalized; if a tax is capitalized, it cannot be shifted.'

To put it another way, the proper treatment in incidence studies of that part of the tax which is assumed to be capitalized depends to some extent on the time dimension of the analysis, a point already discussed in this chapter. In the usual cross-sectional snapshot at a moment in time, it would appear that the most theoretically sound treatment of capitalized taxes is to ignore them, just as taxes attributed to other non-residents of the space (and time) under examination are generally ignored. No one has followed this radical prescription, however.

The procedure suggested by Aaron of assuming that the capitalized land tax is borne by all owners of capital is in a sense equivalent to assuming, as in the 'new view,' that the rate of return on capital has been lowered by the tax. But this assumption is really contrary to the essence of the capitalization process, which in effect adjusts the value of the taxed asset rather than the rate of return, which is taken as given. Either the tax is partial, as in the traditional view, or general, as in the new view: in the former case it will be capitalized and in the latter it will alter the rate of return on capital. One cannot, as Aaron might be thought to do, derive the latter conclusion from the former argument.

More plausibly, his argument could be taken to imply that the past owners (who bear the capitalized tax) are better identified as current recipients of capital income in general than as current landowners, so that if one wants to indicate the probable incidence of the capitalized part of the tax by income class, the former distributive series provides a better guide than the latter. This argument too is suspect, however, unless there is some reason why one should expect the present relation between landownership and income by income class to be different from that prevailing at the time the tax was imposed. No such reason seems apparent, and, indeed, there would appear to be more reason to expect the present landownership-income class relation to reflect the past than there is to expect the property-income class relation to do so.

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[25] Aaron (1975, 47) reports an estimate which shows that assuming the property tax on land is borne in proportion to property income in general makes the tax more progressive, presumably because land constitutes a smaller fraction of wealth in higher income classes.

To sum up, in principle one should perhaps not attempt to allocate the burden of capitalized taxes by income class anyway, but if one insists on doing so, present landownership appears to be the best basis for such an allocation. The latter is the procedure which has been followed in the case 4 estimates in chapter four above.

Important and tricky to resolve as the issues concerning the portion of the property tax presumed to fall on land value are, they pale in significance beside the problems with the balance of the tax, particularly that part of the tax falling on rented residential improvements. A useful way to approach this problem is via the following equation: $T/Y = (T/V)(V/R)(R/Y)$, where T is the tax levied on a rental unit with rent R and value V, and Y is income (Aaron, 1975, 32). In other words, the effective tax rate by income class T/Y is the product of the effective tax rate T/V, the value-rent ratio V/R, and the rental-income ratio R/Y. We shall consider each of these components in reverse order.

The evidence related to R/Y, the relation between rents and income, is very mixed and unsatisfactory. A recent summary study by de Leeuw (1971), for example, estimated the income-elasticity of demand for housing services at from 0.8 to 1.0 for renters and, on average, 1.1 for others. De Leeuw also readjusted earlier estimates to show that they provided estimates in the same vicinity. On the other hand, a still more recent paper by Carliner (1973), based on ungrouped panel data, estimated that the elasticities were closer to 0.5 for renters and 0.6-0.7 for owners. Although the only studies located on Canadian data do not separate owners and renters – the US studies usually suggest that the income-elasticity of demand for the former is a little higher – they contain estimates ranging from 0.3 (Oksanen, 1966) to 1.2 (Houthakker, 1965).[26]

[26] Asimakopulos (1965), using cross-section data for Canada 1947-8 and 1959 estimated elasticities of 0.5 to 0.8; Houthakker (1965) in a study of data for 1948-59 for 13 countries estimated the elasticity for Canada at 1.2 and for the US at 1.7; Oksanen (1966) using time-series data for Canada 1947-62 came up with estimates of 0.3 to 0.5. Smith (1974, 29) suggests that the income-elasticity of demand in Canada for owner-occupied housing is higher than that for rental housing but he does not estimate them separately. In addition to the de Leeuw and Carliner studies mentioned in the text, Lee (1968) found higher elasticities for renters. Other US studies examined include Kartman (1972), Lee (1963), Muth (1960), Reid (1962), Straszheim (1973), Wilkinson (1973), and Winger (1968): the elasticities estimated in these studies (on different data bases) ranged from a low of 0.2 in Wilkinson and Winger to a high of 3.0, also in Winger.

The importance of these estimates is clear if the property tax is assumed to be distributed in proportion to housing consumption, as is usually done. An income-elasticity of less than 1.0 means that higher-income groups spend proportionately less of their income on housing than lower-income groups, while a value greater than 1.0 means the opposite. If the former condition prevails, then the property tax will, other things being equal, be regressive on the assumption of full forward-shifting, while the latter will make it progressive.

This point has been demonstrated clearly by Aaron (1975, 35), who shows that the distributional pattern of the tax is given by $E_{T,Y}$, the elasticity of tax collections with respect to income, which in turn depends directly on $E_{R,Y}$ (the income-elasticity of housing expenditure) and two other elasticity measures, $E_{t,Y}$, the elasticity of tax rates with respect to income, and $E_{V/R,R}$, the elasticity of the value-rent ratio with respect to rents.[27] The higher $E_{R,Y}$, the more progressive the tax, other things being equal. After discussing the issue, Aaron assumed that a value of around 1 is probably as good an over-all estimate as any, a conclusion roughly supported by such Canadian studies as Smith (1974), who estimated the permanent income-elasticity of demand for housing as between 0.6 and 1.0.

In view of the importance of this question, however, and the high degree of uncertainty in all studies of the relation between income and housing expenditure, it would seem a good idea to assume several elasticity values, say, the 0.6 and 1.0 estimated by Smith, in order to see what difference it makes. Only one study has apparently attempted to do this (on 1961 US data): the result was, as one might expect, that the burden of the property tax appeared more regressive the lower the elasticity estimate (Mayer, 1974). While it is hard to know how to deal with this problem, particularly since most incidence studies are in terms of current income rather than the 'permanent income' concept used in most housing demand studies,[28] it seems clear that at the least alternative specifications should be tried.

Aaron's own calculations on US data for 'normal' income suggested that the $E_{R,Y}$ for renters was well below unity. That part of the tax falling on them, other things being equal, would therefore be quite regressive, although for homeowners he argued the tax tended to be progressive because $E_{R,Y} > 1$. In the absence of clear information to the contrary it is probably safe to carry these conclusions over to the Canadian case, remembering, however, the earlier caution that one cannot really assume that all the tax on rental property (or even on rented structures) is in fact shifted forward.

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[27] The precise relation is $E_{T,Y} = E_{t,y} + (1 + E_{V/R,R})E_{R,Y}$. As noted below, Aaron's discussion is in terms of 'normal' income.

[28] $E_{R,Y}$ should of course, be *lower* with respect to current than to permanent income, thus accentuating the measured regressivity of the tax. Mayer (1974) used two versions of permanent income as the base and found the lower elasticity estimate produced more regressive results in both cases.

Turning to the second component in the equation set out above, V/R, the value-rent ratio, the only available study of this ratio, by Peterson (1972), suggests that it *increases* with rent. The probable reason for this result is that low-rent residential units tend to be in older buildings whose market values are relatively lower than their rents, owing to their shorter expected lives. The elasticity of this ratio with respect to rent has been estimated at 0.5 to 0.7 (Aaron, 1975, 33). The higher this elasticity, the more progressive the property tax will be, given the income-elasticity of demand for housing and the tax rate-income elasticity. If taxes are proportional to the value of property, for example, a value-rent ratio to rent elasticity ($E_{V/R,R}$) of 0.7 means that the shifted portion of the property tax on rental property would be progressive even if the rent-income elasticity is as low as 0.6.

While there is a good deal of casual empiricism (such as conversations with real estate brokers) in support of the assumption that $E_{V/R,R}$ is greater than zero, it is hard to know how much credence to give this point. In particular, the observation by Netzer (1973, 530-31), that the rent-value ratio is indeed probably very low for the lowest-rent residential property (slums) but does not vary systematically with rent for other housing, appears to have a good deal of merit. Even so, the importance of this parameter at the bottom of the income distribution is extremely significant. Contrary to Aaron (1975, 38), who argues that even taking this factor into account, the property tax on tenants is probably slightly regressive (on the traditional assumptions),[29] Netzer's analysis suggests that, *provided* assessments are uniform across value classes, 'the tax may not be regressive at all for the poor. It may be regressive as between middle-income and high-income renters, but this is surely a less serious policy concern' (Netzer, 1973, 531). This argument seems both clear and convincing. In short, a well-administered property tax should show little regressivity at the lower end of the income scale, even for tenants and even if the income-elasticity of demand for housing is less than unity.

The value-rent ratio is thus clearly a high priority research matter for those interested in the incidence of the residential property tax. Although there appears to be no Canadian evidence on the point, at the very least it seems safe to say that the elasticity of this ratio with respect to rent ($E_{V/R,R}$) is *not* zero, contrary to what has been implicitly assumed in all Canadian incidence studies to date. Indeed, as noted above, this elasticity is in all probability significantly greater than zero at least with respect to the lowest-rent properties, which are presumably inhabited by the people with the lowest incomes. If so, the apparent regressivity of the tax in the lowest income classes shown in the estimates in chapter four is at least in part a statistical artifact rather than a reflection of reality.[30]

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[29] Parenthetically, Aaron's estimates appear to include the taxes on land values also, thus overstating regressivity, since one would expect a significant fraction of these taxes to be capitalized even in the long run.

The argument to this point assumes that there are no assessment biases which would tend to offset the factors discussed above. This brings us to the final component in the initial equation, T/V, the effective rate of the property tax in relation to market value, and its associated elasticity ($E_{t,Y}$). as noted in chapter three, Aaron (1975, 37) suggested that in the United States average tax rates by jurisdiction in fact tend to increase slightly with income with the result that for the country as a whole the tax was probably progressive, assuming $E_{V/R,R}$ is positive and $E_{R,Y}$ is not significantly less than 1. On the other hand, Netzer (1973, 532) has argued, contrary to Aaron, that the geographical variation of effective tax rates in US metropolitan areas leads to regressive results because in many cases low personal incomes and high differential tax rates are positively associated. So far as Ontario is concerned, as we noted in chapter three there appears to be no systematic relation between income levels and a tax rate by regions.

Within jurisdictions, however, Aaron noted that there is some evidence that the property tax is in fact administered in such a way as to raise the effective tax rate on lower-priced housing relative to that on higher-priced housing – for example, because of assessment lags which tend to result in the under-evaluation of more rapidly appreciating properties (Engle, 1975). Later in the same study he suggested that apartments tend to be assessed at a higher ratio of market value than single-family houses (Aaron, 1975, 60-61). All these points were supported in chapter one above on assessment in Ontario. Netzer (1973, 531) has similarly suggested that over-assessment of slum housing in particular is widely prevalent, partly because of the rent-value phenomenon noted above and the common use of the rent capitalization method of assessment.

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[30] This relation between values and rents may well shift over time, of course, thus complicating matters still further. This problem is particularly important in an inflationary period, especially one characterized on the one hand by rapid increases in residential property values and on the other by rent controls. In these circumstances, one might expect the value-rent ratio to *fall*, an argument which receives some support from the suggestion of the Commission on the Reform of Property Taxation (1977, 99) to *reduce* the proportion of rent assumed to reflect property taxes (see also chapter seven below). There seems no reason, however, to expect these forces to affect the value-rent ratio differently at different rent levels, however, so the general text discussion stands.

The usual reaction of economists facing a situation like this is simply to ignore the whole question in the hope that the various biases in the assessment system will cancel out. The earlier discussion of Ontario assessment practices in chapter one suggested that to the extent poor people live in older buildings (the 'trickle-down' theory) they are probably favoured by assessment practices, unless they rent the properties, in which case they may or may not be penalized. If they live in old apartment buildings, however, they probably pay higher taxes than if they live in single family dwellings, while if they live in areas with rapidly-rising real estate values (like Toronto in the early 1970s) they probably pay lower taxes. The only thing that is completely clear about all this is that there will be wide variations within the same income class depending on exactly where the individuals live so that, as noted earlier, class averages such as those reported in most incidence studies are not very meaningful.

What this discussion indicates is that we do not at present really know much either in general or in any particular situation about *any* of the three components affecting the tax-income ratio in Ontario (T/V, V/R, and R/Y). It follows that the 'knowledge' about the T/Y ratio displayed in the usual quantitative incidence study - and also in the new estimates presented in chapter four above - simply reflects and compounds these uncertainties. Little reliance can thus be placed on these estimates even if the applicability of the theory is completely accepted.

What is *not* acceptable in the light of what we do know, however, is simply to ignore the importance of the T/V and V/R ratios (or to assume that they precisely offset each other for all income classes), as is in effect done in studies which assume that T/Y varies directly with R/Y - and usually assume more certainty with respect to the latter than seems warranted by the available evidence. In the absence of a much more careful empirical investigation than has been feasible in this study, perhaps the only conclusion which emerges from the discussion in this section is that not too much weight should probably be attached to the regressivity in the lower income ranges suggested by the quantitative exercises in chapter four.

The final conclusion of this extended review of the theory and practice of property tax incidence is thus that we do not really know much about the subject, but that what little we know does not suggest that the tax is significantly regressive in any meaningful sense - though it may well be regressive for some people in some places at any particular time (and it may well cause a 'liquidity' problem for other people). It is hard not to conclude on the basis of this discussion that far too much has been said about this subject on the basis of very little evidence, and that much of what has been said is, at best, misleading and, at worst, wrong.

WHERE DOES ALL THIS LEAVE US?

Such nihilism is too strong a note on which to end this lengthy discussion of property tax incidence, however. Therefore, this last section first states the reasons why incidence studies seem usually to be conducted, then argues that they are not very relevant for these purposes anyway (even if they could be meaningfully constructed), and finally suggests what kinds of quantitative studies *might* be (*a*) conceptually sound, (*b*) empirically possible, and (*c*) policy-relevant.

Gillespie's (1964, 1) stated rationale for his work is simply that 'considerations of incidence and tax equity play an important part in the formation of rational fiscal legislation ....' Similarly, Maslove (1972, 1) emphasizes the importance of equity because 'the income distributional consequences of government action have become a matter of concern in intelligent policy formulation.' Johnson (1967, 1-2) also stresses this point. He goes on however, to note three other uses of incidence studies: (1) to determine the magnitude of the redistribution of income caused by government, (2) to allow a judgment as to whether government's impact on the income distribution is equitable, and (3) to compare the impact of individual taxes on the income distribution.[31] Underlying all these statements, if unspoken, is Musgrave's assumption 'that the economist's informed guess, based on explicit and reasoned hypotheses, is to be preferred ... to the implicit and haphazard assumptions of the practical man' (cited in Bird and De Wulf, 1973, 641). Another implicit assumption is, in effect, that the economist's definition of the ideal of equity in taxation corresponds to that which society holds, or should hold.[32]

It should be clear by now that it is hard to know what, if any, meaning should be attached to the impact of taxation on the distribution of income estimated in these studies. It should also be clear that the standard of equity in these studies is, to say the least, determined rather arbitrarily. In addition, as suggested earlier, there is little evidence to suggest that this standard conforms in any significant way to society's views, and some to suggest that it does not.

Nevertheless, one reason why incidence studies are carried out is that policy-makers often want this information, or think they do. Given the haste with which even good analysts escape from the uncertain complexities of theoretically unsatisfying conceptualization to the technical Elysium of superficially more valid statistical estimation, however, the fact that every study, almost without exception, appears to have forgotten its many qualifications by the time it announces its results, is not surprising.[33] Even less surprising is the alacrity with which those results – or at least those which accord with subjective preconceptions – are used to 'prove' the assumptions which led to them in the first place, thus demonstrating again the insidious power of calculated numbers to prevail over cautionary words. Indeed, over-confidence in the significance of the results is probably the main potential drawback of any kind of quantification.

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[31] Johnson (1967) gives a fourth rationale, international comparisons, which is ignored here except to note that it is far, far weaker even than the other three (Bird, 1976c).

[32] The approach underlying these studies thus corresponds to what Head (1968) has called 'the ethical approach': for a critique of the usefulness of this approach, see Head (1968) and Bird (1970a).

It may be argued, however, that what policy-makers *really* want (whether they know it or not) is a rather different kind of quantification exercise. Fortunately, what they need is an exercise which is both conceptually sound and, in all likelihood, empirically possible. The usual incidence study, as noted, really fails on both counts. Few people in Canada, for example, seem to be much interested in reducing inequality simply for the sake of reducing it: rather concern about distributional issues focuses on two particular categories, the rich and the poor.[34]

So far as the rich are concerned, to a pessimist it might seem that the principal concern of recent Canadian tax policy has been to keep the charmed circle of those who already have wealth as small as possible by taxing earned income heavily while letting existing wealth escape relatively unscathed (Bird and Bucovetsky, 1976). On the whole, apart from the new capital gains tax, the only effective taxation of wealth in this country is probably through the 'blind' (impersonal) progressivity of the corporate income tax and, to at least some extent, the property tax. Those concerned with reducing the relative status of the rich would thus seem well advised to support *increased* rather than reduced reliance on property taxation. Other, more direct, approaches to redress the inequality of wealth and income would of course be better in principle but egalitarians should, it appears, be grateful for what they have.

The kind of empirical work which is needed to improve knowledge (and perhaps even policy) in this area requires much better information on the distribution of wealth in Canada than now exists.[35] A detailed panel study on the wealth and income of the higher income groups might, for example, provide the needed basis for useful simulation studies of the impact on the upper end of the distribution of marginal fiscal shifts – though the pessimist mentioned above would predict that there would be little support for effective taxation of the wealthy, no matter what the information base.

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[33] For some illustrations supporting this assertion, see Gillespie (1964, 189), Johnson (1967, 84-5), Maslove (1972, 77); Dodge (1975) is the most notable exception: see n. 20 above.

[34] This argument in part develops views expressed in Bird (1967).

[35] Poduluk (1974) contains the only published data on wealth distribution in Canada: although these figures are thought to be substantially underestimated, especially in the upper ranges, they clearly show that (1) the distribution of wealth is much more unequal than that of income, (2) that the top 10 per cent of asset holders hold almost 50 per cent of real property, (3) that wealth is very unequally distributed *within* income classes, and (4) that wealth is very much a function of age, so that the lower-income groups,

Similarly, at the lower end of the income distribution it seems clear that 'income' (however measured) is not the characteristic most relevant to Canadian policy-makers, even the most humanitarian. As noted earlier, studies displaying age, homeownership status, and geographical location of those in the lower income class seem both more policy-relevant and more possible than similar studies of the rich. Fortunately, some such data exist in Ontario with respect to the property tax credit, as seen in chapter seven below.

As these remarks suggest (and as was stressed also in the conclusion to chapter three), estimates of the *total* incidence of any broad-based fiscal institution like the property tax are really not very relevant to policy-makers, whatever they may think. What *is* relevant in many contexts are quantitative estimates of the *impact* (not final incidence, except for the very bold) of *marginal* changes on significant population groups. Fortunately, such estimates are (apart from the data problem at the upper end) both empirically possible and conceptually perfectly acceptable. Indeed, such estimates are already made almost routinely as part of the tax policy formulation process. Too much cannot be claimed for such studies, of course, but they are both useful and necessary to rational policy formulation. Eventually, even the difficult dimension problems, and some approximations to general equilibrium incidence analysis, may perhaps be worked into this framework.

The point which deserves repetition and final emphasis here, however, is that what matters is not what the effect of the existing tax system (or any part of it) on income distribution is estimated to be. What matters is rather (*a*) whether or not the existing income (and wealth) distribution itself conforms to prevailing equity norms and (*b*) whether or not any particular tax change will tend to close the gap between the present and desired distribution. If we are interested in the effects of a particular tax change on the income distribution, then that is what has to be studied, not the unanswerable non-question of what portion of whose income is hypothetically taken by the present tax system.

which contain many older persons, have a surprising amount of wealth. Weak as they are, these data thus tend to support the general arguments in the text in favour of wealth taxes as distinct from income taxes (especially when as is now true, the latter do not reach income flows from *all* wealth sources) – as well as the special role of the old in influencing tax policy.

The correct focus for tax incidence analysis is therefore on the distributional effects of specific (and, given the state of the available theory, preferably marginal) tax changes. It is encouraging that the recent study by Dodge (1975) explicitly recognizes these points. That we cannot do more than this does not matter if this is, as argued here, really all we have to do in order to achieve Gillespie's (1964, 1) objective of ensuring that 'considerations of incidence and tax equity play an important part in the formation of rational fiscal legislation.'[36]

So far as the property tax is concerned the basic conclusion of all the foregoing discussion is that the present tax is probably not significantly regressive. Although increases in property taxes in either the province as a whole or in specific municipalities may in some instances be regressive in their impact on some people, the magnitude of any problems arising from this cause does not seem likely to be too great either. In these circumstances, there does not appear to be any great case for general residential property tax relief in Ontario. Nevertheless, some important measures have been taken in recent years with this avowed objective. Two of the most important of these measures are considered in detail in the next three chapters.

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36 In a way, of course, this argument is really a methodological variant of the consistent emphasis in economic analysis on focusing on the relevant decision margin and letting 'bygones be bygones.' As one reviewer of an earlier draft of this study pointed out, there may of course be a conflict between the 'local optimum' one might reach by proceeding marginally in this way and some 'global optimum' way out there: our point, however, is that we know so little (if anything) about this 'global' optimum with regard to equity that this objection to our recommended procedure carries little weight.

6

The Ontario property tax credit

In 1962 the Ontario Committee on Taxation was established to study the tax and revenue system of Ontario with the object of determining whether it was 'as simple, clear, equitable, efficient, adequate and as conducive to the sound growth of the Province as can be derived' (Ontario Committee on Taxation, 1967, vol. 1, viii). At that time, as now, the merits of the property tax in all these respects were hotly questioned. Nevertheless, after an exhaustive examination of this tax, the final report of the Committee (published in 1967) recommended that the existing system of municipal property taxes be retained and strengthened – not so much because of the virtues of the tax as because of the lack of adequate alternatives which could both serve as a major source of local revenue and preserve some degree of local autonomy.[1]

To alleviate what was perceived as the unduly heavy burden of the property tax, and in particular its regressive incidence on poorer taxpayers, the Smith Committee made two fundamental recommendations: first, that provincial grants to municipalities be increased, and, second, that a 'basic shelter exemption' be introduced to relieve residential taxpayers. The effects of increased grants on property taxes are discussed in chapter eight below, while the next two chapters are concerned with the evolution and impact of the basic shelter exemption and its successor, the property tax credit. (Chapter one above discussed the subsequent fate of some other Committee recommendations.)

[1] As noted in chapter one, almost every report on the property tax in Canada has reached the same conclusion: 'it's a bad tax, but ...'

As originally proposed, the basic shelter exemption was to be a flat exemption that would reduce the taxable assessment of each dwelling unit, including both single-family homes and apartment units. It was expected (but not required in any way) that the resulting tax savings to landlords would be passed on to tenants. The specific formula recommended for the basic shelter exemption was the lesser of $2000 multiplied by the provincial equalization factor for the municipality[2] or 50 per cent of the taxable assessment of the self-contained dwelling unit.

Following a provincial election in 1967 the government adopted the Residential Property Tax Reduction Act which, in effect, implemented the recommendations of the Smith Committee concerning the basic shelter exemption, with the exception that the proposed ceiling of 50 per cent of taxable assessment was omitted. Under this Act, owners of self-contained dwelling units benefitted from a reduction in their property tax bill equal to the tax payable on the first $2000 of their equalized assessment. This tax saving was received by deducting the equivalent amount from the property tax paid the municipality, with the province reimbursing the municipality for the full cost of the reduction. The initial full-year cost of this provision to the province was estimated to be $150 million; in fact, it was only $110 million in 1968-9 and reached $150 million only in 1971-2, its last year of operation (Ontario Budget, 1971, 72).

The Residential Property Tax Reduction Act was actually in force before the Select Committee of the Legislature on Taxation in Ontario (the White Committee) finished its review of the Smith Report. The Select Committee Report (1968) supported the general objective of the basic shelter exemption which had already been introduced but was quite critical of its operation in several respects. In particular, this report noted that the basic shelter exemption received by any taxpayer was in no way directly related to his income. Moreover, it was not at all clear that the tax savings reaped by landlords under this Act were being passed on to tenants.[3] Another defect pointed out in the report was that individual family units could receive more than one exemption, particularly since cottages and second homes also benefitted from the exemption, which was not limited to principal residences. Finally, and in some ways most damaging of all in the nationalistic climate of the times, even non-resident owners benefitted from the Act.

To remedy these various ills, and in particular to offset more effectively the presumed regressivity of the property tax, the Select Committee recommended that the basic shelter exemption be replaced by a rebate in the form of a credit against the personal income tax. This was apparently the first explicit mention of the property tax credit in Ontario, although somewhat similar devices had been in operation in at least two US states for a few years.[4]

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[2] See n. 7 to chap. 1.

[3] Landlords were required to pay tenants, or allow as a reduction in rent, an amount equivalent to the tax reduction they received within 30 days of the termination of tenancy or on 31 December, whichever came earlier. This provision assumes, of course, that the tax was fully shifted forward. Its enforcement appears to have been difficult.

As is so often true in Canada, the precise evolution of the property tax credit from this point on cannot be understood apart from the ongoing context of federal-provincial diplomacy which characterizes Canadian public finances. The intellectual parentage of the credit was clearly the Smith Report and the subsequent White Report, with their stress on the need to 'relieve' the regressive incidence of the property tax. But the timing and tone of the various provincial documents on the tax credit program were equally clearly governed by the sequence of events in the federal tax reform which was preoccupying the country in the late 1960s.

As part of its 1969 budget, the provincial government tabled a White Paper on the reform of taxation and government structure in Ontario in which it proposed major reforms in the provincial tax system. One of the key elements in the proposed provincial tax reform was to be the establishment of a separate personal income tax system for Ontario. As part of this plan, the province made its first formal commitment to the adoption of property tax credits, which were to be integrated into the personal tax system.

The 1969 White Paper gave three principal reasons why Ontario felt it had to establish its own personal income tax system within the next two years. Firstly, the province felt that in order to meet existing and future expenditure requirements, it needed more control over fast-growing revenue sources. Secondly, from the provincial point of view, an impasse had been reached with the federal government on federal-provincial tax sharing, so not enough revenue for future needs could be expected from this source. Finally, and most importantly for present purposes, the province felt that the existing income tax abatement system was in any case inadequate for Ontario's long-run finance and reform objectives. (In 1969, the provincial personal income tax was 28 per cent of the federal basic tax. This amount was collected by the federal government together with its own tax and then transmitted to the province. The only way that provincial income tax revenues could be increased was by across-the-board rate increases: changes in the tax base and alterations in the rate structure were the exclusive domain of the federal government.)

[4] Wisconsin introduced its 'circuit-breaker' program (as they are now called) in 1964 and California a more limited similar program for the elderly in 1967: see Abt Associates (1975). A related system was established in Britain in 1966, under which people could apply for a rebate on their local rates if their income was below a certain amount. The central government reimbursed the local government for 75 per cent of the cost: see Department of Housing and Urban Development (1974, 49).

According to the 1969 White Paper, a provincially-administered personal income tax would bring many advantages for Ontario citizens. Not only would there be increased revenues for worthy provincial purposes, but the tax would be more progressive because Ontario would alter the rate structure to make it so. In particular, it was proposed to introduce a system of tax credits, including a property tax credit, which could be integrated into the personal income tax system. Eventually, indeed, it was suggested that the integrated income tax system with credits could replace existing income maintenance programs.[5]

This new tax credit would, in the first place, replace the existing basic shelter exemption. In the future, however, it was suggested that the tax credit system might be extended to cover payments of retail sales taxes, health insurance premiums, and possibly other provincial taxes considered to be regressive in impact. Individuals would be able to deduct some proportion of the provincial and/or municipal taxes they paid from their provincial income tax liability. If the tax credits exceeded an individual's personal income tax liability, there would be a rebate scheme to provide a refund to that taxpayer.

Ontario appears to have seen this tax credit system not only as a way for the province to take the edge off the presumed regressivity of the local tax system but also as a means of linking tax reform and intergovernmental finance by demonstrating the potential of the income tax to finance reforms at other levels of the tax system, thus strengthening the provincial case for an increased share of income tax revenues. The future of the tax credit was in this way closely related to the complex federal-provincial negotiation on tax sharing going on throughout this period. In these circumstances, it is not surprising that it took several years, until 1972, before a property tax credit was actually introduced in Ontario.

Quite apart from its proposal to introduce an independent income tax incorporating credits, Ontario also proposed in 1969 that in the national tax reform then under intensive discussion the federal proposal for increased personal exemptions be replaced by two special measures intended to relieve low-income taxpayers – a low-income allowance and refundable tax credits to offset the provincial-municipal tax burden. In effect, Ontario was pushing for tax credits on a national basis, to be financed by the federal government, to relieve the burden of provincial and municipal taxes on low-income taxpayers. The 1969 White Paper on Tax Reform issued by the federal government rejected this proposal and called for increased exemptions. Nevertheless, the federal government did explicitly agree to discuss the possibility of credits on a provincial basis with Ontario. This agreement was hailed by Ontario as a great step forward in tax reform in a statement which shows clearly that the original ambitions underlying the property tax credit went far beyond relieving tax regressivity (Ontario Budget, 1972, 93):

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[5] This is by no means a silly idea: for an excellent recent proposal on similar lines, see Green (1973). See also the discussion in chapter seven below.

> Equally important, the acceptance of Ontario's tax credit plan by the Government of Canada represents a positive step towards developing a guaranteed income plan for all Canadians. The property tax credit plan will provide valuable experience in using the income tax system as a refund or pay-out mechanism. It will generate much needed information about people who are filing an income tax form. It will offer a realistic approach towards supplementing the income of our working poor. Eventually, it may be adapted as the basic mechanism for underpinning the income of all Canadians and replacing the present myriad of welfare schemes.

Following the appearance of the new federal Income Tax Act in 1971, the Ontario government began to work out the administrative details of the property tax credit with the Department of National Revenue in Ottawa.[6] Among the major problems that had to be negotiated was Ontario's desire for the Department of National Revenue to compute the amount of the credit, but for the *province* to make the refund to the appropriate taxpayers so that they would recognize that the property tax credit was a reduction in property taxes financed by the Ontario government and not a reduction in income taxes financed by the federal government. On the grounds that such a system would be administratively confusing, Ontario lost this point. The result was that the federal revenue department (Revenue Canada) now administers the property tax credit and issues any necessary refunds on behalf of the Province of Ontario.

Another problem was the reluctance of the then Department of National Revenue to process returns for individuals with no taxable income, who would now be encouraged by the tax credit scheme to file tax returns. This problem could not be avoided in principle – though, as noted later, it appears that not too many people have in fact taken advantage of this possibility. Finally, also in the interests of administrative simplicity, Ontario's proposal for the inclusion of a sales tax credit was rejected initially, although both a sales tax credit and a special tax credit for pensioners were introduced in 1973.

While all this federal-provincial discussion was going on, several modifications were introduced in the Residential Property Tax Reduction Act. In 1969, for example, the size of the refund was limited to 50 per cent of total municipal taxes on the property, as had originally been proposed by the Smith Committee. In the same year, a program of supplementary tax relief for old age pensioners was launched. Pensioners who received the income-tested federal Guaranteed Income Supplement and maintained an independent household (whether owners or tenants) were to receive up to $100 in addition to the basic shelter grant. (This program was originally intended to replace an existing municipal loan program described later in this chapter – though in fact the loan program continues to exist.)

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[6] This account is largely based on Todres (1976).

From 1968 to 1972, when the property tax credit was introduced, the province paid out an estimated $558 million in grants to municipalities to finance tax relief for residential property taxpayers, including $32 million in special pensioner relief (Ontario Budget, 1971, 72). The formula employed in the Residential Property Tax Reduction Act ensured that the size of the grant received increased with the size of the property tax, but the introduction of a flat $30 element in the grant in 1970 also ensured that proportionately greater relief went to lower tax areas. In 1970, for example, the average grant received in Haliburton region, with the lowest average property taxes in Ontario, was $37, or 48 per cent of average taxes, while the average grant in York region, with the highest average taxes, was only $72, or only 17 per cent of average property taxes (Ministry of Treasury, 1976c). While there is some relation at the extremes between high taxes and high incomes in Ontario regions, there is, as noted in chapter three, no significant relation between these factors over the province as a whole, so the residential property tax relief distributed by this program bore no clear relation to the income of recipients. This defect (as it was considered by the 1968 Select Committee) was also to be remedied in principle by the new credit system.

The background of the Ontario property tax credit should now be clear. The Smith Committee, in its detailed study of the property tax in Ontario, concluded that the property tax was regressive in impact and argued that the province should intervene to reduce the burden of this municipal tax on residential taxpayers. The provincial government responded by introducing the basic shelter exemption system in the Residential Property Tax Reduction Act of 1968. This Act marks a crucial point: thereafter, the provincial government was clearly, and designedly, linked in the eyes of the taxpayer with the property tax. The subsequent tax credit made the provincial acceptance of responsibility for the incidence of the property tax even clearer, as was noted in chapter two. The actual result of the federal-provincial negotiations on tax credits, however, was to produce a fascinatingly complicated system in which, in effect, the *province* has taken over the responsibility for the incidence of a *municipal* tax by having the *federal* government administer tax relief on its behalf. One would be hard-pressed to think of a more thoroughly Canadian policy outcome than this!

OBJECTIVES OF THE CREDIT

In introducing the property tax credit in 1972, the Treasurer of Ontario assigned it the following impressive list of objectives (Ontario Budget, 1972, 80):

> To relate the combined burden of income tax and property tax bearing on Ontario residents to their individual ability to pay.
> To reduce the total tax burden on the lowest income families and individuals in Ontario.
> To extend property tax relief to roomers, boarders and others who do not presently benefit from provincial tax relief grants and to eliminate tax relief to non-residents and to taxpayers who can afford to pay.
> To permit better control over the total provincial-municipal tax burden on Ontario taxpayers.
> To establish a flexible and efficient pay-out mechanism as the first step towards the eventual replacement of welfare and subsidy programs with a general income support program.

Another, quite different, motive avowedly underlying the adoption of the credit was to make it possible, by softening the regressivity of the property tax, for municipalities to use this tax more vigorously: 'By reducing the regressivity of property tax burdens, the Province enables municipalities to make more use of the property tax. The financial advantage of tax credits and rebates is therefore greater than the actual amount expended by the Province in the transfers themselves (White, 1973, 6).' The Ontario property tax credit, in short, was intended not so much to *reduce* total property tax burdens on Ontario residents as to *raise* them – albeit in a more equitable fashion. The principal objective of the credit was clearly to reduce the perceived regressivity of the property tax. Although its characteristics as an income transfer program were recognized, the emphasis was very much on the use of the credit to offset the property taxes presumably burdening low-income residents, including tenants, roomers, and boarders, and, more generally, to relate the 'net' burden of the tax more closely to 'ability to pay.'

It is interesting to compare these objectives to those attributed to the somewhat similar US 'circuit-breaker' programs in a recent study: (1) to reduce regressivity, (2) to shield low-income people from large tax liabilities, (3) to let old people keep their homes, (4) to slow down the deterioration of neighbourhoods, and (5) to influence voting behaviour (Abt Associates, 1975). The success of the US programs in obtaining these objectives was found in this study to be very limited.

The success of any form of property tax relief in relieving regressivity, for example, obviously depends upon whether or not the tax is regressive in the first place, a matter which, as we have seen, is by no means obvious. Although the rationale for the Ontario program was not put explicitly in terms of shielding low-income people from large liabilities, the fact that income is defined as income reported for tax purposes (see below) suggests that the liquidity aspect was of considerable concern in Ontario also, perhaps for the reasons discussed in chapter five above. The US programs were found to have some success in attaining this objective, albeit rather unevenly. At best, a similar conclusion may perhaps be reached on the efficacy of the Ontario program in this respect, especially because it appears to be rather weak in reaching those low-income people who do not normally file income tax returns (see below).

The last three objectives listed for the US programs were also not explicitly mentioned in Ontario, and in fact it is not likely in the quite different circumstances of Canada that there was much concern with the problem of neighbourhood deterioration anyway. As the special pensioner tax programs mentioned above indicate, however, there has clearly been considerable policy concern with the plight of elderly people, particularly homeowners: this point is further discussed below. Moreover, although there is no evidence bearing on this point in Ontario at all, it is perhaps relevant to note here that the extensive US study cited above found no discernible effect of circuit-breaker programs on the housing decisions of elderly residents, perhaps largely because the old seldom move for any reason.

Finally, all governments, whether they say so or not, are naturally interested in how voters behave and in the influence of policy measures on voter behaviour. US evidence apparently suggests that the adoption of property tax relief measures tended to make voters more willing to support expenditure programs financed by property taxes (Abt Associates, 1975). In Ontario, of course, voters almost never have any *direct* say about such matters, since local spending decisions are not subject to referenda, so one must look elsewhere for any possible political influence of the credit program. Two such indirect influences have been suggested earlier. The first was that municipal reluctance to raise property taxes might be weakened once the regressive edges were taken off by the credit: since municipal reluctance in this respect is closely related to expected voter reaction in the biennial elections, the US experience noted above might be of some relevance in this respect. Although it was demonstrated in chapter one that property taxes have been declining in Ontario in most relevant senses, they may well have declined less slowly because of the existence of the credit than would otherwise have been the case. In this sense, then, the credit program may indeed have brought some benefits to municipal politicians and made their lives a little easier. Initially also the credit may well have helped the provincial government at the polls, although there is of course no way to be sure about this. In the long run, however, as suggested in chapter two above, the political effects at the provincial level may turn out to be much less advantageous for the government - simply because it has now, in effect, assumed a degree of direct responsibility for municipal, as well as for provincial, taxes.[7]

THE TAX CREDIT FORMULA

The objectives explicitly stated by the provincial government, at least to some extent, naturally shaped the characteristics of the tax credit formula (which has remained basically the same since it was introduced in 1972, although some details have been altered). For 1975, the basic formula for the property tax credit was as follows:

$$C = K + 0.1H - 0.02Y$$

where C is the amount of the property tax credit; K is the lesser of $180 or H; H is 'occupancy cost,' defined as the property tax paid in the taxation year for owners and as 20 per cent of rent paid in the year for renters; and Y is taxable income as calculated on the federal income tax return.[8]

The actual formula is more complicated than this because there is also a sales tax credit, equal to 1 per cent of total personal exemptions claimed for income tax purposes, as well as a pensioner tax credit of $110 for those 65 years or over. These two additional credits must be added to the creditable property tax ($\mathrm{K} + 0.1\mathrm{H}$) before deducting income. Since the maximum credit is $500, the complete formula is therefore

$$C = K + 0.1H + 0.01E + P - 0.02Y \leqslant \$500,$$

where E is personal exemptions, and P is the pensioner credit (0 if less than 65, $110 if 65 or older.)[9]

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[7] The initial press reaction to the Blair Report (see chapter one) supports this interpretation: see, for example, the *Globe and Mail* editorial (12 March 1977) urging caution in adopting market-value assessment, essentially for reasons of provincial politics.

[8] For college, university, and nursing students in 'prescribed' student residences, occupancy cost is $25 for that portion of the year that they live in residence, or the same amount as provincial grants-in-lieu of taxes were on university property in 1972. This amount was not altered when the in-lieu payment was subsequently raised to $50.

[9] The sales tax and pensioner credits were introduced in 1973, the latter originally at the rate of $100. The original property tax credit formula in 1972 was $\mathrm{C} = \mathrm{K} + 0.1\mathrm{H} - 0.01\mathrm{Y} \leqslant \$250$, with $\mathrm{K} = \$90$. The ceiling amount was raised to $400 in 1973 when the other credits were introduced.

Although there is no explicit income limit determining eligibility for this credit, it is clear that this formula in fact sets an income ceiling which varies with the factors determining taxable income, such as age and number of dependents. Given the relatively minor importance of dependent exemptions (especially 'net' of family allowances) and other personal deductions under the Canadian income tax, age is indeed the most important factor affecting this ceiling.

In 1975, for example, the average property tax paid (under the traditional incidence assumptions) by Ontario taxpayers with gross incomes reported for tax purposes of $10,000 to $12,000 was $431 (Ministry of Treasury, 1976c). A married couple with $12,000 income (and only one income-earner) paying this amount of taxes and claiming only the personal exemptions and no other deductions would be eligible for a total credit of $123.92, of which $76.98 would be for property tax. If both spouses were over 65, however, the credit would be $269.20, of which $100.50 would be for property tax, $110.00 for pensioners' credit, and the balance for sales tax credit. If the younger couple's taxable income were $12,916 (equivalent to $17,610 gross income under the assumptions used here), and they paid the same property tax of $431, they would receive no property tax credit (and about $11.72 in sales tax credit). For the older couple, however, the corresponding 'ceiling' is $19,590 ($25,460 gross). The importance of the age factor is thus considerable. The income ceiling under the Ontario program varies with occupancy cost, age, and other factors influencing taxable income – and, incidentally, it tends to be considerably higher than in any existing US program, especially for older people – but it does exist.

In order to be eligible to receive the property tax credit, one must be resident in Ontario on 31 December of the taxation year and be 16 or older on that day. It is necessary to file a personal income tax return to be able to claim the credit even if one has no taxable income. This means that individuals who formerly did not file a tax return because they had no taxable income, are now in principle encouraged to file a return in order to receive the Ontario tax credits. Although there do not appear to be any accurate numbers available on how many such returns are filed, the *1973 Taxation Statistics* indicate that 55,343 individuals who filed tax returns had a loss or zero income but claimed the tax credit (National Revenue, 1975). Unfortunately, there is no way of determining how many of these people had business losses which would have required them to file tax returns anyway. One unofficial estimate by an informed official is that there may be as many as 500,000 persons in Ontario who are eligible for the credit and do not claim it: if this estimate is anywhere close to accurate, it would appear the coverage of the credit leaves a lot to be desired.

In the case of a married couple living in the same residence, only the spouse having the higher taxable income can claim the credit. The credit, unlike the former basic shelter exemption, applies only to the principal residence and not to second homes and cottages. On the other hand, as noted earlier, it also encompasses roomers and boarders as well as owners and tenants.

The property taxes which are relevant for the purpose of the credit include not only taxes for municipal and school purposes but also taxes levied for local improvements to real property. 'Rent' is similarly broadly defined: it does not include payments for meals but does include utility charges, parking fees and fees for janitorial and recreational facilities when these charges are part of the lease rental payment. Where a municipality provides tax credits to elderly homeowners under the Municipal and School Tax Credit Assistance Act and/or under the Municipal Elderly Resident's Assistance Act (see below), these credits must be subtracted from the property tax payments in that year to arrive at the net property tax paid for the purpose of claiming the credit.[10]

Finally, since 1974, residents of *untaxed* institutions (such as nursing homes) can also claim a property tax credit. 'Rent' in these circumstances is defined as payments made over and above the amount subsidized by the province. This last amendment, of course, makes no sense at all in terms of the alleged rationale of the credit as offsetting property taxes. It can only be understood as, so to speak, a reversion to the early view of the credit mechanism as the nucleus of a more general income-transfer system.

As noted earlier, Ontario tax credits are handled by Revenue Canada on behalf of the Ontario government and are either deducted from the tax otherwise due or lumped together with any income tax refund. Taxpayers must be prepared to substantiate their declaration of the amount of property taxes paid or rent paid upon the request of Revenue Canada.

Since the payments of the credits is therefore related to the timing of income tax returns rather than property tax payments, there are some grounds for thinking that most taxpayers do not in fact connect the tax credit with the property tax at all. Their only direct contact with the credit system is in the form of an additional sheet in their income tax form and (perhaps) a different balance due or owing at the end of their income tax calculation. Most Canadian taxpayers are probably quite unable to disentangle their federal and provincial income tax liabilities already. It seems unlikely that the additional complication of the credit system, which in effect drags their actual or presumed municipal liabilities into the same calculation, has added to the clarity with which citizens are able to perceive the costs and benefits of different levels of government.

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[10] This is the case even though under one of these acts the tax payment is only deferred, not forgiven completely (see below).

SPECIAL PROGRAMS FOR THE ELDERLY

In addition to the special pensioner tax credit introduced in 1973, there are two additional property tax reliefs available to the elderly in Ontario, under the Municipal and School Tax Credit Assistance Act and the Municipal Elderly Resident's Assistance Act. Both of these schemes are local option schemes (that is, to be adopted at the option of the municipality), but only under the first scheme does the province reimburse the municipality for the amount of the credit.

The Municipal and School Tax Credit Assistance Act allows elderly residents 65 years of age and older to defer one-half of municipal and school taxes imposed on residential or farm property, up to a maximum of $150. This amount is reimbursed to the municipality by the Province of Ontario. More important, it becomes a lien on the real property, payable to the province when ownership is transferred, other than to a spouse, brother, or sister over 65. This scheme is thus a tax *deferral* rather than a straight tax rebate. Under the Municipal Elderly Resident's Assistance Act, on the other hand, a uniform tax credit can be made available either to all elderly homeowners who qualify or just those elderly persons receiving the income-tested federal Guaranteed Income Supplement (GIS). The province does not reimburse the municipality for costs incurred as a result of this scheme, which repealed previous special acts to the same effect applying in Toronto, Hamilton, and some other municipalities.

Deferral schemes similar to that in the Municipal and School Tax Credit Assistance Act exist in five states in the United States, although only in Oregon does the state finance it (Abt Associates, 1975). Although there is excellent economic argument supporting this approach to property tax relief for the elderly (see chapter seven), the scheme has proved to be a resounding failure wherever implemented, largely owing to the strong emotional attachment of the old to their homes and to their desire to leave them unencumbered for their heirs. Reportedly, the largest such program in the United States, in Oregon, has only 300 beneficiaries!

Although data on this subject are very scarce in Ontario, it does not appear that Canadians are quite as reluctant to defer taxes as Americans. In the fiscal year ending in 1974, for instance, the province reimbursed municipalities for $507,758 for deferrals granted under this act, which suggests that probably between 1000 to 2000 people took advantage of it in that year.[11] As of 1976, the Subsidies Branch of the Ontario Ministry of Treasury held about 5000 liens in total under this act (Ministry of Treasury, 1977b). The unpopularity of the deferral approach in general, however, has recently been made clear by the recommendation of the Commission on the Reform of Property Taxation (1977, 96) to replace this act by some (unspecified) alternative measure, largely on the grounds that the present act is 'ineffective because those who would benefit are repulsed by the welfare connotation implied, or because they (or their heirs) shy away from the resulting lien.'

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[11] The amount comes from Ontario (1975b, 141). The average property tax paid by Ontario residents over 65 in 1974 with income less than $8000 – those most likely, perhaps, to use this program – was under $400, according to unpublished Ministry of Treasury (1976c) estimates.

Although there are no province-wide data on the local-option grant program established in the Municipal Elderly Resident's Assistance Act, this act is reportedly used in Toronto, Hamilton, Peterborough, Mississauga, and other urban municipalities. In Mississauga, for example, a credit of $100 is granted to owners over 65 in receipt of the GIS who have been assessed as owners of real property in Mississauga for the past five years. The relevant Toronto by-law is practically identical. In the City of Toronto in 1973, 6892 applications for tax abatement were approved under the predecessor by-law (which did not require the claimant to be in receipt of the GIS).[12] This municipally-financed tax abatement program was thus far more important in Toronto alone than was the provincially-financed deferral program in the province as a whole, a fact which again suggests the unpopularity of the latter.

RESIDENTIAL PROPERTY TAX RELIEF IN OTHER JURISDICTIONS

Although Ontario pioneered in the introduction of property tax credits in Canada, similar pressures for 'relief' from residential property taxes have been felt throughout the country in recent years. Some relief measures (notably the homeowner grants of the western provinces, as well as a few provisions for special relief to farmers and pensioners) date back a number of years, but most provinces have substantially revised and extended their legislation since 1972, to a considerable extent in the direction of the property tax credit initiated in Ontario in that year. The current status of general provisions for residential property tax relief in Canada is summarized briefly in appendix D.

As seen in that appendix, residential property tax relief in Canada currently takes four basic forms: (1) homestead exemptions, (2) exemptions based on income, (3) homeowner grants, and (4) property tax credits. Homestead exemptions

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[12] City of Toronto Executive Committee Report no. 3, in City Council Minutes, 1974. The Borough of North York recently decided to grant a similar $50 credit on 1977 property taxes but later reconsidered for cost reasons: it was estimated 5000 elderly homeowners would have benefitted (*Globe and Mail,* 8 January 1977).

(that is, exemptions of part of the assessment base) are apparently now used only to a limited extent in Nova Scotia, while only Newfoundland has an exemption from property tax related to income (though this device may be used by Nova Scotia municipalities also from 1977 on). Homeowner grants are used in Saskatchewan, Alberta, and British Columbia, while Nova Scotia now has a direct grant scheme to tenants. The newest and most popular form of property tax relief, however, is the property tax credit along Ontario lines, variants of which now exist in New Brunswick, Manitoba, and, for tenants only, in Alberta and British Columbia.

The provinces which have done least in this direction, apart from Quebec, are the Atlantic provinces. This relative lack of action in part undoubtedly reflects the fact that the property tax is quite unimportant in Newfoundland, largely a provincial tax in Prince Edward Island and New Brunswick, while even in Nova Scotia it is less important than in the central and western provinces (Feldman, 1976). This lesser importance of the tax probably results in a lower degree of political sensitivity to it, which, combined with the greater pressure on provincial revenues in the relatively poor Atlantic region, perhaps serves to explain why these provinces appear to have felt less pressure to relieve residential property taxpayers than have the other provinces. It would not be surprising, however, to see them following in Ontario's path to at least some extent in the near future as, indeed, New Brunswick has already done.

The only non-official analysis of the effects of these property tax relief measures in any province which appears to have been carried out to date is a study of homeowner grants in British Columbia (McFadyen, 1970). These grants were paid to the municipalities but were to be used to reduce the municipal taxes levied on owner-occupied residents. They were thus closer in concept, and probably effects, to the provincial grants discussed in chapter eight below than to programs like the property tax credit which channel funds directly to individuals.

In any case, employing a variety of approaches – tabular comparisons, interviews, and a simple welfare maximization approach on both time series and cross-section data – McFadyen (1970, 424) concluded that 'the apparent property tax relief provided by the homeowner grant program is appropriated by the provincial government to the extent that it increases its grants to municipalities more slowly after the initiation of the program than it would have in its absence.' He found some evidence suggesting that just this had happened in British Columbia following the initiation of the homeowner grant program in 1957, although the precise effects varied sharply from community to community depending on the reaction of local government officials to the program. In some municipalities, it appeared that taxpayers had their taxes reduced by the full amount of the grants;

in others, local taxes appeared to have increased by *more* than the amount of the grant, in part perhaps because municipal officials ignored the offsetting increases in provincial taxes needed to finance the grant program and viewed homeowners as better off by the entire amount of the grant, and hence better able to pay taxes. McFadyen concluded that residential property taxes paid by homeowners in British Columbia were probably reduced by something between one-third of the total and the total amount of the homeowner grants disbursed by the provincial government. As seen in chapter eight, the results of the property tax stabilization program in Ontario appear to have been towards the high end of this range.

So far as the redistributive impact of the British Columbia program was concerned, McFadyen found, on the whole, that it had little effect, largely because of the exclusion of tenants. This conclusion, however, was based not on a serious incidence study but on casual theorizing which basically accepted the traditional incidence analysis without question. Chapters seven and eight in the present study consider the distributive effects of the Ontario programs considerably more systematically.

Although the only published official evaluation of the property tax credit in Canada, a study of the Manitoba program, is a much more ambitious effort, it too does not consider adequately the incidence of the tax which the credit is presumed to relieve. This study, which was reported in the 1975 Manitoba *Budget Address*, was subsequently updated by the Manitoba Department of Finance. The updated results are reported in Table 6 both for their own sake – especially because they appear to be the only available Canadian figures treating homeowners and renters separately – and because they offer an interesting comparison to the Ontario data presented in chapter seven below. The figures in Table 6 were calculated by matching on an individual basis income as reported for income tax purposes, property tax credits received, and property taxes paid (including an assumed proportion of rent) and then summing the individual returns by income group and computing the percentages shown.

All these items come from income tax returns, and all are, in part for this reason, subject to some question. The income figure, for example, is not a particularly good index of welfare since it excludes many transfer payments, much income in kind, half of capital gains, and so on: as noted in chapter five, for precisely these reasons, most incidence studies use specially computed income concepts. The real difficulty with this exercise, however (as with the fundamentally similar Guelph study discussed in chapter four), lies in the simple *assumptions* that homeowners bear all the property taxes which they pay over to the government and, especially, that 20 per cent of the rent by tenants consists of property taxes which have been shifted forward to them by the landlords who actually

TABLE 6

Manitoba: incidence of the property tax and the property tax credit, 1974 (per cent)

Homeowners				Renters		
Income group ($)	Property tax	Credit	'Net' incidence	Property[1] tax	Credit	'Net' incidence
1000-1999	31.2	18.7	12.5	21.6	18.2	3.4
2000-4999	11.7	5.6	6.1	4.8	3.9	0.9
5000-7999	6.2	2.5	3.7	3.2	1.8	1.0
8000-11,999	4.5	1.4	3.1	2.7	1.4	1.3
12,000-19,999	3.8	0.9	2.9	2.1	0.7	1.4
20,000-39,999	3.2	0.6	2.6	1.7	0.4	1.3
40,000 and over	1.2	0.2	1.0	1.3	0.1	1.2

SOURCE: Data provided by Manitoba Department of Finance

[1] 20 per cent of reported rent (used as proxy for property tax burden)

paid the tax over to the government. The commendable use of individual data in this study in no way makes these assumptions any better than the theory which underlies them, as shown at length in earlier chapters.

In any case, on the assumptions used, the property tax in Manitoba is shown to be extremely regressive; interestingly, more so for homeowners than for renters. Since the credit received by the two groups is distributed in much the same way (the Manitoba credit operates in much the same way as the Ontario program), the result is that the property tax credit appears to alleviate most of the tax burden for low-income tenants, though low-income homeowners appear still to be considerably burdened. This result, of course, presumes that the credits serve simply to increase the income of those who receive them. As always with quantitative incidence studies, the numbers in Table 6 can offer no independent support of the validity of the theoretical assumptions which have been employed to derive them in the first place.

A very similar study, as yet unpublished, has been conducted by the Ontario government (unfortunately, without distinguishing homeowners and tenants), as reported in chapter seven below. Outside of Ontario and Manitoba, however, no other province has apparently attempted to analyse the distributional effects of either the property tax or the measures taken to offset it. Instead, as noted in chapter one, they have simply assumed that the property tax was regressive (and therefore bad), so that any measures taken to relieve the burden of this tax obviously would be progressive (and therefore good).

The situation in this respect is not much better in the United States, despite the incredibly rapid spread of income-related property tax credits in that country in recent years, the much greater availability of data, and the much larger community of governmental and academic fiscal analysts.[13] As in Western Canada, the traditional form of property tax relief in the United States has been the 'homestead exemption,' under which a specified portion of the assessed value of single-family houses is excluded from total assessed value for the purpose of property taxation.

A major criticism of this method of property tax relief is that the benefit goes to all homeowners regardless of their income or value of their property. A similar point was noted earlier about the basic shelter grant in Ontario. Another argument is that by definition renters are excluded from homestead exemption programs: but if, as is conventionally believed, property taxes are fully shifted forward to tenants, then renters also bear the burden of property taxes and should in principle be eligible for tax relief. Finally, homestead exemptions have been criticized as reducing municipal tax bases without state compensation. Largely in response to such criticisms what are now called 'circuit-breakers' or income-related credit schemes have been introduced in the last few years in some twenty-five states.

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[13] This account of American experience is based mainly on Advisory Commission on Intergovernmental Relations (1975b) and Abt Associates (1975).

Circuit-breakers were first introduced in the United States by Wisconsin in 1964. The idea of the circuit-breaker is to prevent property tax 'overloads' on the poor, without cutting off the flow of revenue from those able to pay. The existing US programs vary considerably according to beneficiaries, income ceilings, administration of relief, and the type of formula used. The remainder of this section summarizes these aspects of the US programs briefly, comparing them to the Ontario system, in order to set the stage for a technical appraisal of the latter in chapter seven.

A general circuit-breaker of the Ontario variety, which applies to renters and homeowners of all ages, is currently used in only five states. Most programs apply to the elderly only: six states limit circuit-breaker relief to elderly homeowners only, while one (North Dakota) restricts relief to elderly renters. Ontario, of course, provides a special additional credit for the elderly.

Similarly, only three states follow Ontario in having no explicit income ceiling: all the others extend relief only to those below a certain income level, ranging from $3500 in North Dakota and Arizona (for single people) to $15,000 in Oregon and $20,000 (gross) in California. As noted earlier, Ontario has a *de facto* ceiling varying with age and other items affecting taxable income.

In addition to this difference, 'income' in almost all the US programs is much more broadly defined than in Ontario where, it may be recalled, *taxable* income is used as the standard for measuring the need for property tax relief. Some US property tax relief programs also take asset holdings into account in determining eligibility for benefits. The income concepts in most US programs clearly reflect their origin and intended function as a 'welfare' or 'relief' program. In the US, as in Canada, much more care has traditionally been exercised in welfare programs than in tax programs to include in the definition of 'income' many of the elements in the economist's concept of the 'comprehensive tax base' (Royal Commission, 1966). Some implications of these important differences in concept between the Ontario program and most US programs are discussed further in chapter seven.

US circuit-breaker programs are administered in three forms. The income tax credit approach, for example, is very similar to the Ontario system. The individual taxpayer files a claim with the state tax department, generally with his income tax return if he files one, and receives a credit against his state tax liability. The main difference in Ontario is that the Ontario credit is administered federally, though it still represents a credit against provincial income taxes. A second method used in the United States is also administered at the state level but provides rebates separately from the income tax. The claimant may apply for a credit as soon as his property tax bill arrives in order to receive his rebate before he actually has to pay the taxes. The third method is simply to reduce the property tax bill, usually by the claimant applying to a local tax official for the rebate, followed by an appropriate reduction in the tax bill. The state then reimburses the municipality for the credit. Apart from the state reimbursement, this last method is similar to the local option reduction for elderly residents in some Ontario cities described above.

There are advantages and disadvantages to all three methods of receiving the credit. The first two methods, administered by the state, allow for confidentiality, unlike the locally-administered rebate. However, like the Ontario credit, when the circuit-breaker is administered along with the income tax and is received as a credit against the income tax liability, it has what is often considered the disadvantage of looking like a reduction in *income* taxes rather than a reduction in *property* taxes. The locally-administered rebate, on the other hand, being directly related to property tax payments, is clearly seen as a reduction in property taxes.

Although the exact formulas for tax relief differ widely across states there are basically two types of relief - the threshold approach and the sliding-scale approach. Under the sliding-scale approach, used in eight states, the rebate consists of a fixed percentage of property taxes for each eligible taxpayer within a given income class, with the percentage declining as income rises. Under the threshold approach, used by 13 states, any tax above what is defined as an 'acceptable' tax burden is deemed excessive and qualifies for relief. In this approach, the 'acceptable' tax burden is basically defined in terms of some fixed percentage of income. This is the approach used in Ontario, where the threshold level is 2 per cent of taxable income. Any tax above this level is, in effect, considered to be 'excessive' (subject to a specified maximum credit, currently $500).[14]

A number of states have also introduced a 'coinsurance' provision, requiring taxpayers to bear some of any tax increase even after the threshold level has been reached. This is done simply by rebating less than 100 per cent of the tax in excess of the threshold. The argument for such a provision is that once the tax reaches the threshold level, property taxpayers will have no incentive to vote against further tax increases because they know that they will not really have to pay them.[15] The Ontario program, of course, has no coinsurance feature.[16]

14 All states have similar limits on the amount of the credit.

15 As noted earlier, a recent study suggested that this result may have ensued in some US states (Abt Associates, 1975).

16 There has also been a good deal of discussion in the US of the appropriate definition of the participating unit and the accounting period: in Ontario the accounting period is of course simply the tax year and while the unit is referred to as the household, in fact only the spouse with the higher taxable income can claim the credit even when separate income tax returns are filed.

7

Appraisal of the property tax credit

The Ontario property tax credit described in the previous chapter may be appraised with regard to its technical merits and demerits, its probable impact and incidence, and its general success in fulfilling the agenda, explicit and hidden, with which it was originally charged. This chapter takes up each of these points in turn, beginning with a few technical comments on the tax credit formula.

Perhaps the most serious question concerning the particular formula employed in Ontario is its use of *taxable* income as its (implicit) measure of ability to pay. Although in other respects the Ontario property tax credit is similar to the threshold-type of circuit-breakers used in a number of US states, most of these programs employ a definition of income which is considerably broader than gross income as reported for federal tax purposes. As one study noted: 'a program which defines income as (federal) adjusted gross income will discriminate against households with disproportionately high wage, interest and rental income and in favor of those with a relatively high proportion of income from Social Security, capital gains not fully taxed, pensions and annuities, public assistance, gifts, and other untaxed sources.'[1] Most US programs therefore include in income a number of these non-taxed items (though by no means all). *All* include all taxable income sources. Though most states make some allowance for costs associated with acquiring income, none appear to follow Ontario in relating benefits only to income reported for tax purposes *after* allowing for all exemptions and deductions.[2]

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[1] Abt Associates (1975, 39). Studies in Wisconsin and Minnesota, for example, found 67 per cent of the income of elderly households receiving property tax relief in those states came from such non-taxed sources.

As noted in chapter six, the extensive attention paid to this question in the various American programs really reflects their origins as an outgrowth of *welfare* policy rather than tax policy. Income transfer programs in the United States as in Canada have long tended to employ such devices as 'broad' concepts of income and asset tests to ensure that only the truly worthy benefit. In sharp contrast, tax policy in both countries, as noted in chapter five above, has as a rule resolutely focused on the realized-flow-of-current-money-income concept of ability to pay, despite the best efforts of academic economists to sell the virtues of a more comprehensive approach to defining taxable income.

The Ontario property tax credit is, in this sense, very much a *tax* rather than a transfer policy. Its design reflects primarily the search for an administratively simple scheme within the framework of the existing income tax. Given the complex federal-provincial negotiations recounted in chapter six, this should be no cause for surprise. Nevertheless, the result is that the property tax credit, like the income tax itself, relates to an income concept which is a far cry from the economist's concept of an equitable measure of ability to pay.

The apparently overpowering administrative rationale for the use of a figure from the income tax return does not, however, necessarily support the use of *taxable* income (of the highest-income spouse) as the basis for determining the amount of the credit. The case for the use of the taxable income basis presumably rests on the argument that this income concept is a better measure of ability to pay than gross income or net income. It seems clear that gross income would indeed be unsuitable, since surely the costs of earning income should be allowed for. It is much less clear, however, that *all* the deductions and exemptions between gross and taxable income – pension contributions, registered savings plans, interest and dividend income deductions, medical expenses, charitable contributions, and personal exemptions – should equally be taken into account. In particular, the implicit allowance for certain forms of savings and capital income may well mean that over some income ranges taxable income is, in any relevant sense, a less accurate measure of 'ability' than some broader income concept would be.[3] The point here is simply that some deductions permitted on the way to the taxable income figure may be there for incentive reasons and may have nothing to do with the conventional idea of income as an equitable tax base.[4]

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[2] A number of states also attempt to take some account of assets in determining eligibility, though not as a rule, the amount of tax relief granted. Iowa, however, includes in its definition of income 10 per cent of net worth (including equity in the residence) over $35,000.

When imputed rents were estimated at 5.4 times property taxes paid, and included in reported income in Ontario 1975 data, a significant number of taxpayers were shifted to higher income classes throughout the income range (Ministry of Treasury, 1976c). The number of taxpayers with incomes (including imputed rents) below $4000, for example, fell from 31.1 per cent of total Ontario taxpayers to 28.6 per cent. A recent careful analysis by Wolfson (1977), although it illustrates in considerable detail the confusingly complex patterns of income and wealth distribution in Canada, suggests that there may even be an inverse correlation between wealth in the form of home ownership and income.

While there would seem to be nothing in principle preventing a redefinition of the income concept (within the range of items reported on the tax return) for purposes of the credit, no doubt the concern for administrative simplicity has precluded following this avenue in the past. The recent proposal of the Commission on the Reform of Property Taxation (1977, 98-9) to use 'total income less total personal exemptions' instead of taxable income for purposes of the tax credit calculation would involve little complication, however, and may perhaps prove acceptable: it certainly makes more sense than the present practice.

The Ontario program in principle has clearly identified those who are eligible for the credit. In practice, however, very little appears to have been done to inform all eligible persons of the existence of the credit and how to claim it. This problem of 'outreach,' as one US study labels it (Abt Associates, 1975), is not easy to solve, but there seems little reason for not trying to do so more vigorously than appears to have been the case in Ontario to date. If the credit program is worthwhile, it is presumably worth bringing to the attention of all eligible people through an active enrolment program. In this regard, the strong connection between the Ontario credit and the increasingly complex package of income tax forms facing Canadian taxpayers has undoubtedly limited the extent to which the program has reached some of those (particularly elderly immigrants with little command of English) who most need assistance, whether in the name of property tax 'relief' or any other shibboleth. More could, and should, be done along these lines.

As noted in chapter six, the Ontario credit requires beneficiaries to be residents of the province as of the end of the year in question. Most US programs have much stricter residence programs, ranging up to 10 years in Massachusetts. Indeed, even the small Ontario municipal assistance program to the elderly outlined in chapter six required five years residence *in the municipality*. Since one of the stated rationales for the adoption of the credit approach in 1972 was to limit the benefits to residents, one might well have expected a stricter residence standard in Ontario also. Again, the explanation for the present system presumably lies in administrative factors: the key question on the federal tax return simply asks for province of residence as of 31 December. Only Oregon and California, which also administer the credit along with the income tax, use a similar 'date' system in the US.

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[3] Indeed, it may even be suggested that for many Canadian taxpayers, the present income tax is really closer to an expenditure tax than an income tax – and since expenditure falls as a proportion of income as income rises, the progressivity of this income tax base in terms of current income is less than that of a 'grosser' concept of taxable income.

[4] On the other hand, a tax based on personal expenditure is of course, closer to one based on 'permanent' income than is a 'true' current income tax. This tenuous line of thought suggests that, so to speak, the long-run equitableness of the present income tax may actually have been *increased* rather than reduced by the recent proliferation of savings deductions. Nevertheless, it seems clear that no one concerned with the design of the Ontario property tax credit was thinking such esoteric thoughts at the time.

Many US property tax relief programs provide special benefits to elderly homeowners: in fact, 27 states give benefits *only* to older people, while 14 others give greater benefits to older people than to others. Ontario, in a sense, does both, since the two special municipal programs (admittedly on a local option basis) are only for the elderly while the tax credit program provides substantially larger benefits for old people. In addition to the special pensioner credit, as was shown in chapter six elderly taxpayers receive larger credits because they get differentially larger personal exemptions than other taxpayers, which both increases their sales tax credit and reduces their taxable income (and hence the rate of reduction of the credit). Thus, while the Ontario credit in principle covers the entire property-taxpaying population – which only five states do – in fact it provides significantly greater benefits to older taxpayers. This feature of the Ontario program tends to support the implicit importance in Ontario, as in the United States, of such policy objectives as offsetting large current tax liabilities of low-income taxpayers and helping the elderly to keep their homes (see chapter six). Although the Commission on the Reform of Property Taxation (1977, 66) came out strongly against the relevance of the age factor, and recommended the removal of the special credit for pensioners, its proposal would still benefit the aged differentially by taking into account the extra income-tax deductions for the aged.

The Ontario program appears to be comparatively generous in its treatment of renters.[5] While 19 US states similarly extend some benefits to renters, only two states (Connecticut and Wisconsin) appear to extend the renter credit to residents of untaxed (subsidized) housing. Eight states extend similar credits to residents of non-profit nursing homes, as Ontario has done since 1974. No other program, however, appears to grant a credit to university students living in *untaxed* residences. These aspects of the Ontario credit program reinforce the earlier interpretation that in at least some respects it appears to be intended as a direct cash transfer program, unrelated to even a presumed property tax burden.

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[5] Mobile home residents, whether owners or tenants, are also eligible for the Ontario credit, but only if their home is taxed as real property. The Commission on the Reform of Property Taxation (1977, 27) suggested a special licence fee on those mobile homes not so taxed but did not indicate whether or not the residents of such homes should also get a credit.

As for the basis of the renter credit, all the US programs, like that in Ontario, simply assume that a percentage of the property tax ranging from 14 to 25 per cent (with Ontario's figure of 20 per cent being the most common) is 'equivalent' to the property tax component of rent. In no case does there appear to have been any particular basis for the choice of this magic figure. In this regard, the recent recommendation of the Commission on the Reform of Property Taxation (1977, 99) to *reduce* the percentage of rent taken as 'occupancy cost' to 10 per cent is particularly interesting. The apparent basis for this recommendation is some unspecified 'test data' which presumably indicate that property taxes (based on values) had fallen as a proportion of rents in recent years.[6]

As was noted in chapter six, the credit formula presently employed in Ontario is a 'threshold' formula, relating the tax credit directly to the amount of the property tax (presumed) paid in excess of some threshold income level. One characteristic of this formula is thus inevitably to distribute more benefits to those areas with higher than average property taxes, as seen below. Two respects in which the Ontario formula differs from a number of US circuit-breaker programs employing similar formulas, however, are that it has no 'coinsurance' factor and that it applies a constant income percentage at all income levels. The general form of threshold formulas is $C = a(b - cY)$, where C is the amount of credit, a is the coinsurance factor, b is the amount of tax 'relieved,' c is the percentage of income, and Y is income. If a is less than 1, as in some states, only some fraction of the property taxes in excess of cY are rebated: in Ontario $a = 1$ so that there is no restraining influence through this mechanism on property tax increases. Similarly, whereas in many US programs c is larger for higher incomes, thus accentuating the progressivity of the credit, c is always 2 per cent in Ontario.[7]

There is, of course, no 'right' solution to the design of tax (or credit) formulas, but some degree of graduation in the 'threshold' rate might, for example, serve to offset the widening divergence as income levels rise between taxable income and some more meaningful concept of income as a means of ability to pay. Again, it appears that the design of the Ontario credit may have been unduly constrained by the desire to keep it as simple as possible and within the income tax framework.

[6] Unfortunately, here as elsewhere, the Commission gives no hint of the actual data on which this conclusion is based. See also the comments in n. 30 of chap. 5.

[7] To illustrate, in Maryland the threshold increases from 3 per cent of income to 9 per cent of income as income increases. Five states hold the rate constant, as does Ontario, while 12 vary the rate with income levels.

Perhaps the most interesting aspect of the revision of the tax credit formula recently proposed by the (Blair) Commission on the Reform of Property Taxation (1977, 97-101) concerns the two features just discussed - the coinsurance factor and the progressivity of the formula. In effect, the Commission's proposal would alter the Ontario formula from a simplified 'threshold' formula to a 'sliding-scale' formula by limiting the maximum amount of relief to 90 per cent of the tax (presumed) paid and by reducing the percentage of tax relieved as income rises. In the terms used in chapter six, the present formula, ignoring the sales tax credit, is $C = K + 0.1H + P - 0.02Y \leqslant \$500$. The Commission's formula (also ignoring the sales tax credit) would be $C = aH$, where a falls from 0.9 (90 per cent of occupancy cost) for those with income (redefined as noted above) of zero to 0.8 for incomes of \$3501, 0.2 for incomes of \$4501, and 0 for those with incomes over \$7500.[8] This change would increase the amount of credit received by lower income recipients (below about \$6500) and reduce the amounts received by those with incomes between about \$7500 and \$16,500 (Commission on the Reform of Property Taxation, 1977, 102). (Those with higher incomes on average receive no credits under the present system also.)

The intent of these changes seems generally commendable. The rationale for limiting the maximum credit to 90 per cent of 'occupancy cost' is presumably, as in the many American programs with similar devices, to ensure that local residents will always bear at least some of the burden of local tax (and spending) increases. In terms of basic democratic theory, this makes some sense: the trouble with this approach, however, is that, as noted elsewhere, it seems highly unlikely that citizens connect the income tax credit with their property taxes anyway. Similarly, even with the improved income definition proposed by the Commission, there is merit in the argument noted above for some degree of progressivity in the formula. Finally, while there is no 'right' or 'wrong' credit formula, it is of interest to note that the Commission's formula would likely tend to distribute less to high-tax jurisdictions than does the present formula, assuming, as seems reasonable, that more households at each income level in *high* tax jurisdictions will reach the point where tax liability as a percentage of income exceeds the level considered 'excessive' under the threshold approach (Gold, 1976).

IMPACT OF THE CREDIT

Table 7 presents an Ontario Treasury estimate of the distribution by income class of property taxes, tax credits (including sales tax credit), and property tax net of credit in 1975. These figures assume that the property tax on rental property is

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[8] The Commission would also abolish the maximum credit (as well as the pensioner credit, as noted earlier).

TABLE 7

Property tax and tax credit as a percentage of income (Ontario, 1975)

Gross income ($,000)	Property tax (%)	Tax credit entitlement (%)	Property tax net of Ontario tax credits (%)	Average tax credit ($)
0-1	51.0	41.2	9.8	206
1-2	14.4	16.9	–	253
2-3	10.1	10.0	.1	252
3-4	8.1	7.1	1.0	251
4-5	6.7	5.1	1.6	230
5-6	6.1	4.1	2.0	224
6-8	5.9	3.7	2.2	221
8-10	4.1	1.7	2.4	151
10-12	3.9	1.1	2.8	119
12-15	3.4	.6	2.8	80
15-20	3.3	.3	3.0	49
20-25	3.7	.3	3.4	59
25-35	3.0	.2	2.8	75

SOURCES: Ontario Treasury estimates based on a sample of 1973 income tax records for Ontario extrapolated to 1975.

NOTES:

1 The property tax borne by renters is assumed to be 20 per cent of rent paid.

2 The amount of property taxes for 1975 is estimated under the assumption that property taxes increased by 6.6 per cent between 1973 and 1974 and by 10.1 per cent between 1974 and 1975.

shifted forward to tenants and amounts uniformly to 20 per cent of rent paid, that all property taxes on homeowners are paid by them, and that the initial impact and final incidence of the tax credit are identical.[9] The implications of altering some of these assumptions are discussed in the next section.

Under these assumptions, the property tax is regressive throughout – indeed, astoundingly so in the lowest income classes. Since the tax credits are distributed in a similar fashion, however, the third column in Table 7 indicates that the net effect of the credit system is to turn the property tax into a mildly progressive tax, except for the extreme income classes, particularly the lowest one. Indeed, the property tax is more than offset in the second lowest income class, apparently owing to the inclusion of the pensioner tax credit in these figures.[10] These results compare very closely to those in the Manitoba study reported in Table 6 above.

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[9] All figures in this section include farm property taxes as 'residential' taxes, even though not all farm property is residential. The tax credit figures include sales tax credits.

[10] Information supplied by Ontario Ministry of Treasury. The average property tax paid by

As discussed at length in chapters three to five, however, it is *most* unlikely that the property tax in Ontario is in fact as regressive as shown in Table 7. It may also be argued, as hinted in chapter six, that the tax credit approach may have a rationale quite independent of correcting any presumed general regressivity of the property tax. One such argument is that even though the tax may be fairly progressive over all, there may nevertheless be particular groups who suffer a proportionately larger burden, such as the elderly, those in the lowest income groups, or those in certain municipalities which depend relatively more heavily on property taxes. As one American study put this case:

> In a real sense, the regressivity issue is something of a red herring. Property tax relief proponents have defended their proposals in large part on the basis of the regressivity of the tax, so critics logically have focused on this same issue. Nevertheless, there would be a need for property tax relief even if the tax were proportional – or even progressive – if the absolute level of the tax worked a hardship on some persons. A reasonable analogy is the need for exemptions to skilled subsistence-level income under an income tax that features largely progressive rates (Advisory Commission, 1975b, 16).

Another argument which points even more strongly in the same direction is the view that tax credits should really be part of the general income-support system in society. This view was, for example, clearly stated in the budget statement which introduced the credit when it noted that 'eventually, this approach may also prove to be an effective vehicle for implementing a guaranteed income to the working poor and replacing the present jungle of welfare and income support programs' (Ontario Budget, 1972, 13). Although such sweeping statements have not been heard in recent years, the introduction of the pensioner credit in

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persons in the \$1000 to \$1999 gross income class is \$216, while the average credit is \$253. If all persons in this class were pensioners, their taxable income would be zero and the implied property tax they would pay would in fact be only \$76.64 (C = \$76.64 + \$7.66 + 0.01(\$5870) + \$110 = \$253). On the other hand, if all were pensioners and paid \$216 in property taxes, the average credit would be \$370.30 (C = \$180 + \$21.60 + \$110 + 0.01(\$5870) = \$370.30). In both cases, the difference between average tax and average credit would be much greater than it is, which presumably means that there are also many non-pensioners in this income class. Unfortunately, the necessary information to work out exactly what the situation is was not available. For somewhat similar figures (apparently for 1976?), see Commission on the Reform of Property Taxation (1977, 102).

1973 and the extension of the property tax credit to residents of untaxed institutions in 1974 suggest that the notion of using the credit device as an income transfer mechanism is still alive in Queen's Park. There is thus a strong case for considering the distributional impact of the tax credit quite independently of any assumptions about the incidence of the property tax.

From this point of view, Table 7 suggests that the tax credit system is quite successful in providing most relief to those in need, since lower-income households receive a much higher proportion of their 'income' in the form of transfers under this program than do higher-income households. The last column of Table 7 supports this conclusion on the whole since the recipients of lower incomes in general clearly receive larger credits on average than do the higher income recipients.[11] Over much of the low-income range, however, the average credit received is relatively constant.

Two other clearly relevant distributional criteria in Canada concern age and place of residence.[12] Table 8 shows the distribution of tax credits (including sales tax credit) in 1974 by income class and age of principal taxpayer. This table shows clearly that within every income class the amount of credit received is directly related to age, with people over 65 being by far the favoured recipients, for the reasons discussed earlier. On the other hand, it is also clear from Table 8 that on the average people over 65, even a few with incomes as high as $25,000 to $35,000, received larger tax credits than non-elderly taxpayers with incomes of less than $3000. The tax credit program thus appears to be considerably more efficient in delivering money to the elderly than to low-income people in general.

Furthermore, this conclusion holds, though to a lesser extent, if we revert to considering the credit as an offset to the property tax because, perhaps surprisingly, it appears that the property tax (under the traditional assumptions used in Table 7) constitutes a higher proportion of the income of people aged 40-64 in the two lowest income groups than it does of people aged 65 and over in these income groups.[13] The specially favourable treatment given pensioners,

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[11] The very lowest income group receives less, in part, because of the large proportion of students in this group who are entitled to a minimal property tax credit (C = \$25 + \$2.50 = \$27.50). (This assumes no taxable income; the total credit would of course be higher owing to the sales tax credit.)

[12] Unfortunately, little information is available, other than that reported here, to enable us to identify how the $385 million disbursed through the tax credit system in 1974 (compared to $178 million in 1972 and $296 million in 1973), was distributed by income category, age group, or region. A recent Treasury publication, however, shows that 2.9 million persons (or 62 per cent of Ontario tax-filers) received an average credit of $133 in 1974, with 80 per cent of the total credits being received by the 70 per cent of recipients with incomes less than $10,000 (Ministry of Treasury, 1977a).

[13] See chap. 4 above, where a similar phenomenon was noted in the earlier Guelph study.

TABLE 8

Distribution of tax credits by age and income class (Ontario, 1974) ($)

	Age of taxpayer			
	Under 25	25-39	40-64	65 and over
Gross income				
less than 999	34	60	85	243
1000-1999	29	37	85	256
2000-2999	37	46	86	260
3000-3999	91	137	181	284
4000-4999	111	148	186	292
5000-5999	136	165	172	269
6000-7999	121	144	154	251
8000-9999	92	118	127	225
10,000-11,999	78	95	102	225
12,000-14,999	48	64	67	193
15,000-19,999	21	37	38	144
20,000-24,999	–	36	23	82
25,000-35,000	–	6	37	109

SOURCE: Ontario Treasury estimates based on a sample of 1972 income tax records for Ontario extrapolated to 1974.
NOTE: The average tax credit here refers to the average credit per *claimant*. Many of the low-income claimants are either students who live at home for part of the year or secondary income earners who claim the sales tax credit only: the average credit of claimants in the lower income brackets is therefore biased downward. Similarly, in the upper income brackets a few claimants with unusually high occupancy cost and/or high exemptions and deductions may receive credits, but the number of such claimants is small, as is their proportion of total credits paid.

however, means that while the credit offsets over 80 per cent of the presumed property tax burden for the old in these groups, it offsets less than 30 per cent of the presumed tax for the middle-aged (Ministry of Treasury, 1976c).

The property tax credit also provides greater benefits to municipalities with relatively low average incomes. Table 9 shows the average income, average property tax, and average credit (excluding sales tax credit) for 12 regions in Ontario, ranked according to 1973 average income per household from highest to lowest. It is clear from this table that the highest property taxes are found in the highest income regions. On the other hand, it is equally clear from Table 9 that there is no systematic association between property taxes as a percentage of income and income levels.[14] The same relationships appeared in a more detailed

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[14] Spearman's coefficient of rank correlation between these two columns was 0.0420, which is insignificant at the 5 per cent level.

TABLE 9

Distribution of tax credits by region in dollars and percentage of income (Ontario, 1973)

Area	Average income per household ($)	Average property tax bill $	%	Average Ontario tax credit $	%
Toronto conurbation	14,508	502	3.46	87	0.59
Ottawa conurbation	14,243	446	3.13	78	0.54
Northwestern wilderness	13,109	222	1.70	73	0.56
Niagara conurbation	12,602	404	3.21	81	0.65
Kitchener-Waterloo conurbation	12,159	361	2.97	84	0.69
Northern urban	11,955	278	2.33	71	0.60
Southwestern Ontario	11,566	360	3.11	81	0.70
Northeastern wilderness	10,837	206	1.90	73	0.67
Nipissing-Renfrew	9746	233	2.39	78	0.80
Southeastern Ontario	9297	259	2.78	79	0.85
Georgian Bay region	8202	262	3.19	81	0.99
South central Ontario	8033	261	3.24	80	0.99

SOURCE: Ontario Treasury estimates based on a sample of 1973 income tax records for Ontario.

NOTE: Unlike Tables 7 and 8, this table *excludes* sales tax credits.

examination of the relationship between income levels, property taxes, and property taxes as a proportion of income in 49 upper-tier municipalities (counties, districts, and regional municipalities) and in 36 urban centres.[15] As might be expected, more or less the opposite situation is suggested in Table 9 with respect to the property tax credit: the average credit received appears to be unrelated to the average income level, but the credit as a percentage of income is systematically inversely related to income levels by region.[16]

The property tax credit thus systematically tends to transfer relatively larger amounts to lower-income regions, even though in general there is no clear association between income levels and property tax shares. This result presumably comes about because the effects of the higher average incomes in the better-off regions tend to more than offset the fact that property taxes are also higher –

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15 The Spearman rank correlation coefficient in 1973 between average property tax and average household income (0.7424) was positive and significant for the upper-tier municipalities (less so for the urban centres) and negative but insignificant between average income and property tax as a per cent of income (–0.1332, as calculated by the Ontario Treasury).

16 Again, the Spearman rank correlation coefficients support this statement: 0.0991 between average credit and average income and –0.9251 between average income and credit as per cent of income.

though not systematically so – in those regions. At the same time, property taxes tend to be relatively high in the very lowest-income regions also, so that taxpayers there gain by both elements of the credit formula. Moreover, there is some evidence that the property tax credit system is quite different from the previous basic shelter grant in this respect. As noted above, the average credit (in dollars) received in 1973 was not systematically related to income levels; the benefits distributed under the former Residential Property Tax Reduction Act, however, were strongly and directly related to income, presumably because of the greater importance of the size of the property tax and the lesser importance of income in the old formula (Ministry of Treasury, 1976c). The distributional effects of the old system in geographical terms were thus likely perverse when viewed as an income transfer mechanism while the new system is at worst neutral and at best operates in the presumably desired direction.

INCIDENCE OF THE CREDIT

The last section considered the impact of the property tax credit under the implicit assumption that the renters and owner-occupiers who receive the credit reap all the benefits from it. However, just as in chapters three to five we argued that those who pay the property tax over to the government are not necessarily those who bear the burden of the tax in any relevant sense, it may also be argued that the person who receives the property tax credit from the government is not necessarily the one who finally benefits from it. Indeed, many of the same arguments can be applied in both cases.

Consider, for example, a tenant who receives a tax credit, and assume for the moment that he perceives the tax credit as a reduction in the property tax and thus in the rental price of housing. In the short run, he clearly benefits from this credit. In the longer run, however, a perceived reduction in the price of housing will lead renters to demand more housing. Since the supply of rental housing probably adjusts to increases in demand relatively slowly, the result of this increased pressure on demand will likely be an increase in rents. In other words, some of the benefits of the tax credit may accrue to landlords, especially in the short run, depending on the elasticities of demand and supply for rental housing. Transfers, like taxes, may be shifted from their initial recipients through the workings of market forces, especially transfers which act like price reductions for particular goods and services, as the tax credit has been assumed to do in this case.

In general, one might perhaps expect the benefits of tax credits to remain with owner-occupants. In this case too, however, if the credit is perceived as, in effect, a reduction in the cost of housing, there may tend over time to be some 'trading up' of houses that would not otherwise have taken place and hence some shifts of economic benefits. On the other hand, it could equally well be argued that if the credit is perceived by the market as in effect reducing the annual running costs of one particular asset, residential housing, some at least of the credit would tend to be capitalized (at least temporarily, until supply adjusts) into higher housing prices, with capital gains consequently accruing to existing owners. Theory is thus unclear, and relevant empirical evidence is non-existent.

One can even conceive of a 'new view' of the incidence of the property tax credit which sees it as resulting in a slight initial increase in the rate of return on capital in Ontario, thus attracting more capital investment until the rate of return in the province is lowered again to the North American norm. The effects of the credit would in this case probably be progressive, though with the progressivity being achieved through higher real wages rather than through direct income transfers to consumers of housing services.

These few examples are simply intended to illustrate that all of the reasoning developed in chapter three on the incidence of the property tax may be applied, *mutatis mutandis*, to the property tax credit. In other words, the final economic incidence of the credit is at least as hard to discern as that of the tax itself, which is, as careful readers of this study will have thoroughly learned by now, saying quite a lot indeed. All this, of course, assumes that individuals (and that wonderful abstraction, the market) perceive the credit as a reduction in property taxes and hence in the price of housing.

A quite different consequence which has sometimes been ascribed to the same perception is that tax credit recipients may now be more willing to support programs to be financed by increased property taxes than they otherwise would be. A program often praised for lowering property taxes (net of the credit) may indeed raise them sufficiently before taking the credit into account to offset the credit itself. As noted in chapter six, the argument that the credit permits higher property taxes has at times been explicitly put forward by the Ontario Treasury; the possibly 'overenthusiastic' reaction postulated in the preceding sentence has received some tenuous support from a recent American study (Abt Associates, 1975).

The prospect of such results may be applauded by those concerned with municipal fiscal problems or deplored by those concerned – like those American states with coinsurance factors in their credit formula, and perhaps also (though implicitly) by the Commission on the Reform of Property Taxation with its similar proposal – with the resulting weakening of the connection between taxes and expenditures and the consequent lessening of political responsibility. The balance of economic argument clearly supports the latter position (Bird, 1976d), though the former perhaps accords more closely with the desires of most Canadian governments.

All these arguments are valid, however, only to the extent that the property tax credit is viewed by its recipients as a decrease in the property taxes they pay. It is not at all clear that this is in fact the case in Ontario. As described earlier, the property tax credit is administered federally along with income tax returns. The credit is received in the year following the property tax payments in the form of a reduction in (or refund of) federal and provincial *income* taxes. Consequently, it seems highly questionable whether taxpayers really regard the credit as a reduction in property taxes.

As one author noted about the Ontario credit: 'Although relief will be forthcoming under the new amendment to the lower and middle income taxpayer, that relief in the eyes of municipal taxpayers will have little connection with the property tax. Taxpayers will view property taxes separately from income tax and property taxes will still be seen by the taxpayers to be a great burden. It is perhaps the effect of this separation that is most important for the municipalities' (Makuch, 1973, 72). He deplored this result because he was concerned with the need of municipalities to raise more revenue; others may deplore it because they are concerned with the desirability of re-establishing fiscal responsibility and citizen control over government. Sproule-Jones (1975, 89), for example, considers devices like property tax credits to be rather like general purpose vouchers which may enable citizens to constrain local governments through more clearly articulated demands, while at the same time decentralizing and redistributing revenues.[17] There is no obvious meeting ground between the diametrically opposed conceptions of local government embodied in these two positions.

Regardless of the aim of the reasoning on either side, however, the conclusion that most people probably see little connection between the property tax and the property tax credit appears well-founded. Furthermore, in view of the tenuous nature of our knowledge as to who really pays the property tax, this is one instance in which public 'ignorance' is probably closer to the truth than official 'knowledge.' In these circumstances, then, perhaps the most satisfactory way to evaluate the property tax credit is as a simple income-transfer program.

This approach has the advantage of avoiding the problem of the incidence of the credit - since the incidence of a straightforward income transfer (no price effects) can fairly safely be considered to be the same as its impact - but it forces us to face up squarely to the inadequacies of the present credit as an income transfer policy. The credit certainly helps the old more than the young, as we have seen, and may also help people in relatively low-income areas a little more than those in high-income areas. It also, though more uncertainly in the case of the non-elderly, delivers more money to the poor than to the rich. Like most

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[17] The example he cites is the study by McFadyen (1970): see chap. 6 above. For a related argument, see Bird (1976d, chap. 3).

Canadian income transfer programs (Bird, 1976d, chap. 15), however, for the most part it probably shuffles money around within various segments of the middle class. None of these characteristics in itself really makes the credit notably better or worse than most transfer policies, which also favour the old and, more shakily, low-income people, especially those in low-income regions.

What does call the credit system more into question when viewed as an income-transfer system is its dependence on wealth. As Gaffney (1973, 68) has said: 'To use property tax relief as a substitute for welfare is to distribute welfare in proportion to wealth, surely an odd notion.' Even if one does not accept that wealth has some independent validity as a measure of ability to pay, it is indeed surely odd to distribute more income subsidies to those with more wealth than to those with less wealth. Yet this is what all transfer systems based in part on a measure, however imperfect, of real property assets undeniably must do. The general case for property tax 'relief' to homeowners may indeed, as seen earlier, be stronger than that for relief to renters in terms of the liquidity problem to which so much policy attention has been devoted. But if one remembers that there is some connection between homeownership and wealth, this case too tends to fade away under critical scrutiny. All in all, whatever perspective one adopts, it seems difficult to argue convincingly that the property tax credit system in Ontario has been either terribly successful or terribly needed.[18]

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18 This is not to deny, however, that there is very substantial merit in the tax credit approach to income supplementation in general, along the lines originally proposed by the Ontario government in 1969: see Green (1973) and Bird (1976d, chap. 15). Furthermore, it may be argued that it is more feasible to build from an existing policy (such as the property tax credit) towards a desired policy (a general tax-credit income supplement) than it is to discard the former because of its defects in the hope of someday being able to achieve the latter. In tax policy, as in other realms of life, it is almost always a mistake to let the desire for perfection blind one to the (perhaps) marginal merits of one imperfect scheme over another, usually equally imperfect, one.

8

The property tax stabilization program

As noted in chapter one, the provincial response to the growing pressure on the municipal property taxpayer in the 1960s took two main avenues: increased provincial grants to municipal governments and direct provincial 'offset' payments to taxpayers. This chapter discusses some aspects of the former, particularly the probable effect of the 'property tax stabilization program' introduced in 1973. Because many features of this program evolved from earlier unconditional grant programs, however, it is useful first to consider them briefly.

Although provincial transfers to municipalities in Ontario to finance specific services (conditional grants) began in the nineteenth century, it was not until 1936 that the province instituted a program of unconditional grants, initially to compensate the municipalities for being pre-empted from the income tax field by the province.[1] This first small program was expanded in 1937 under the Municipal Subsidy Act, which provided for unconditional payments to all municipalities except counties, with the amount of the grant being equivalent to the amount the municipality would receive if it applied a tax rate of one mill to its taxable assessment. This grant was to be used solely for the purpose of reduction of the general municipal tax rate 'so that the benefits of such grant or subsidy would ... accrue, directly, to the benefit of the ratepayers of the municipality, and the same should ... not be applied or used by the council for any other purpose.'[2] No doubt this condition (on an 'unconditional' grant) could not be effectively enforced, but it made the intent of the legislature very clear. Much the same objective also appeared in different forms in subsequent unconditional grants.

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[1] This historical summary draws heavily on Dupré (1967). Municipalities, of course, are still not happy with being shut out of the lucrative income tax field: for a recent discussion of the prospects for municipal income taxes in Canada, see Johnson (1974).

[2] RSO 1937, c. 276, cited in Dupré (1967, 27).

In 1949, however, this general unconditional grant program was temporarily suspended and replaced by grants under the Fire Department Act and the Police Act, which provided payments (varying with municipal population) intended to reimburse a proportion of the previous year's expenses on these two services. The yield of these two grants was guaranteed to be at least as great as that of the former unconditional grant program in 1948. Although, as noted below, police services have periodically been singled out from this time on to receive some form of special grant, a new general Municipal Unconditional Grants Act again came into effect in 1954, providing for per capita grants varying with the type of municipality and its population.[3]

In 1957 a major amendment to the Municipal Unconditional Grants Act required that the grant payment be used specifically for the purpose of relieving the tax burden on residential and farm property only. As noted in chapter one, the result of this amendment was the introduction of the split mill rate system into Ontario, with a higher mill rate being struck for commercial and industrial property than for residential and farm property. This differentiation was further accentuated in 1961 with respect to school taxes.

Following the recommendation of the Smith Committee that provincial grants be increased to reduce the burden of municipal property taxes (see chapter one above), the provincial government acted swiftly both to increase grants and to reduce pressure on municipal expenditures by absorbing such functions as justice and assessment. It also, as noted earlier, launched a major reorganization of local government in Ontario. In 1970 a Regional Municipal Grants Act and a new Municipal Unconditional Grants Act were enacted in order to provide per capita grants to both the new regional municipalities and to local municipalities. These acts were amended in 1972, with the new per capita grants being related solely to population and special provision being made for payments towards the financing of police costs. The provincial concern with relieving property taxes

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3 The larger urban municipalities received larger grants under this program. Since these are also generally the higher-income areas of the province, the distributional effects of these grants were presumably regressive. The provincial grant program in 1961 as a whole, however, which consisted mainly of conditional grants, appears to have transferred more funds per household to less urbanized than to more urbanized regions (Crowley, 1971). (Crowley's estimates of redistribution are actually for 'net' redistribution after deducting the presumed incidence of the taxes assumed to finance the grants. This dubious exercise is not the basis for the preceding statement, however, which rests simply on the relation between grant payments and income levels shown in his data.)

through increased grants reached a sort of conceptual climax in 1973 with the appearance of the property tax stabilization program – although this program as such officially lasted only until 1975 when the present Ontario Unconditional Grants Act replaced the Municipal Unconditional Grants Act and the Regional Municipal Grants Act.

The principal focus of this chapter is on the property tax stabilization program as it existed in 1973 and 1974. Many features of this grant, however, closely resembled the earlier unconditional grant programs mentioned above. A recurring objective in all Ontario unconditional grant programs, for example, has been the reduction or stabilization of municipal property taxes. As noted above, as early as 1937 municipalities were explicitly directed to use the then new unconditional grants solely to reduce municipal taxes. Two decades later, unconditional grants were directed even more explicitly to the end of reducing the property tax burden on residential and farm taxpayers.

It is clear that the property tax stabilization program was similarly supposed to result in reduced property tax rates. Indeed, the official position is that it *has* done so: 'It is fair to conclude, therefore, that the Ontario government reform has resulted in a dramatic reduction in the relative burden of property taxes' (Ontario Budget, 1975, 3). It thus seems clear that a principal motive underlying the considerable expansion of provincial grants in the early 1970s was to hold off increases in property tax rates, perhaps partly in order to restrain property tax growth until the assessment base was rectified and made sounder – and perhaps partly for obvious political reasons.

Earlier unconditional grant programs in fact often provided funds to finance specific services – such as social services in 1954, police and fire services in 1949, and the hospitalization of indigents in 1964. In this tradition, the 1973 property tax stabilization (PTS) program also made special provision for those municipalities providing their own police forces. Like the linkage to property tax rates, such provisions in effect constitute conditions on allegedly 'unconditional' grants. In this and other respects, then, the PTS grant represented not so much a break in past policy as a further evolution in it (as, indeed, did the replacement of the PTS program as such in 1975).

THE PROPERTY TAX STABILIZATION GRANTS

The property tax stabilization program was intended to do four things: (1) to provide basic assistance to all municipalities, (2) to recognize special problems of municipalities with a low tax base and temporary population, (3) to provide special assistance to municipalities in Northern Ontario, and (4) to encourage economies in municipal spending (Ontario Budget, 1973, 12). To accomplish these four objectives, the PTS program included three separate components: the per capita grant, the general support grant, and the resource equalization grant, together with special variations in the grant formulas for municipalities in Northern Ontario and for ‘mining’ municipalities (which are also, of course, mainly in Northern Ontario). The principal innovations in the PTS program were in the resource equalization grant and the general support grant, with the latter being designed explicitly with the objective of providing an incentive to slow the rate of municipal property tax increases.

The simplest part of the new program was the per capita grant, which increased the payments to municipalities which had formerly been made for police services under the Municipal Unconditional Grants Act of 1970 to $3.00 per capita. Similarly, grants for police services to regional municipalities under the Regional Municipal Grants Act of 1970 were increased to $5.00 per capita for all municipalities providing police services. Other payments under the 1970 acts continued as before. In 1974 the per capita grants for policing were enriched to $5.00 and $7.00 and in 1975 to $8.00 and $12.00, levels which were maintained in 1976. The general per capita grants were also raised in 1974, though not since then.

A conceptually more interesting grant was the new resource equalization grant, which gave grants to municipalities equal to one-half their relative ‘assessment deficiency’ times their 1972 net levy (roughly, property taxes levied for municipal purposes plus certain other revenues), subject to a maximum of 20 per cent of their 1972 levy. The ‘assessment deficiency’ of a municipality was defined as ‘the amount by which its per capita equalized assessment falls below the approximate provincial average per capita equalized assessment of $10,000. The proportion of the municipality’s assessment deficiency to $10,000 is its relative assessment deficiency’ (Ontario Budget, 1973, 43). In fact, however, the formula employed actually works out as a rule so that the maximum Resource Equalization Grant was received when the per capita equalized assessed value was $6000.[4] Municipalities with higher per capita equalized values received reduced grants, while payments to those with lower values were restricted by the 20 per cent limitation. The purpose of this grant was of course to reduce disparities in tax bases among municipalities in order to enable poorer municipalities to provide equal service levels (assuming equal costs) at tax rates equal to those in richer municipalities.

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[4] The resource equalization payment to a lower-tier municipality in 1973 was the lesser of (i) $[0.5(10{,}000 - \text{EAV/POP}) / 10{,}000]\,\text{NGL}_{\text{RE}}$, or (ii) $0.2\ \text{NGL}_{\text{RE}} + 0.8$ (1972 formula mining revenue payment), where EAV is equalized assessed value, POP is population, and NGL_{RE} is net general dollar levy as defined for the purpose of calculating the resource equalization grant. (The NGL concept was defined differently for purposes of the general support grant, as noted below.) It can be seen from this formula that when per capita equalized assessed value is $6000, the two formulations are equal (apart from the complication introduced by the mining revenue aspect, which of course acts to increase the minimum grant to those municipalities in receipt of mining revenue). On ‘equalized’ values, see n. 7 to chap. 1.

In 1974 the provincial treasurer claimed that this grant had succeeded in this purpose (White, 1974, 57) and raised its amount to cover 60 per cent of the 'relative deficiency' (with a standard of $10,100) and a maximum of 25 per cent of the 1973 net general levy (which now included certain grant receipts also). By 1976 the relevant assessment basis had crept up to $10,400, but the grant was otherwise unchanged.

The most interesting component of the 1973 property tax stabilization program was undoubtedly the new general support grant, which provided payments to municipalities amounting to between 2 and 6 per cent of their 1972 net tax levy, with the percentage varying inversely with the rate of expenditure increase over the previous year. Although allowance was to be made for expenditures resulting from 'extraordinary circumstances,' the intention of this grant was clearly to provide an incentive to restrain expenditure increases and hence property tax rates. An additional grant of 10 per cent of the net levy was provided for municipalities in Northern Ontario.[5]

In 1974, the rate of the general support grant was raised to from 3 to 9 per cent of the 1973 net levy (now redefined to include receipts from both the resource equalization grant and the general support grant itself), and special provisions were made for certain new regional municipalities and, again, for Northern Ontario municipalities.[6] As this increase suggests, the grant was thus

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[5] In 1973 the general support grant was distributed in accordance with the following formula:

$$\left\{0.14 - (E_{73}-E_{72})/E_{72}) - [((\mathrm{EAV}_{73}-\mathrm{EAV}_{72})/\mathrm{EAV}_{72}) - 4{,}0000]\right\}\mathrm{NGL}_{\mathrm{GS}}$$

where E is gross expenditure, EAV is equalized assessed value, $\mathrm{NGL}_{\mathrm{GS}}$ is net general dollar levy as defined for the purpose of calculating the general support grant, and subscripts indicate years. For Northern Ontario municipalities 10 per cent of their $\mathrm{NGL}_{\mathrm{GS}}$ was added to this formula, while for upper-tier municipalities the formula was the same except that their net general levy was defined differently. The minimum and maximum grants under this program were constrained to be 2 per cent and 6 per cent of $\mathrm{NGL}_{\mathrm{GS}}$ respectively. (As a final complication, mining municipalities were entitled to a grant equal to the larger of 105 per cent times the 1973 mining revenue payment or the sum of the resource equalization and general support grants.)

[6] There is, indeed, an interesting parallel between the continued favouritism to the old in provincial payments to individuals (see chaps. 6-7) and to the North in provincial payments to municipalities. In both cases, it is quite common for special provisions to be made both in the basic formula – compare the use of taxable income in the property tax credit with the inclusion of mining revenue in the resource equalization formula in n. 4

considered to have been successful in restraining expenditure increases, apparently because 'almost 61 per cent of municipalities had spending growth rates below the 10 per cent target announced in the 1973 Budget' (White, 1974, 3).

By 1975, however, the bloom had apparently gone off the rose as the linkage of the general support grant with the rate of increase of municipal expenditures was quietly severed and replaced by a flat grant to all municipalities equal to 6 per cent of their net general levy.[7] The only rationale offered for this change was 'greater simplicity' and it was emphasized that in 'removing the spending growth schedule, the Government does not imply less urgency in restraint' (McKeough, 1975, 4). The new flat-rate grant of 6 per cent has since been maintained.

What did all the innovations in the 1973 property tax stabilization program, both those which have survived and those which have faded away, actually amount to in the end? Table 10 suggests that in one sense they could not have amounted to much, simply because they have never been very important quantitatively. Total unconditional grants in 1973/4 – (of which the PTS grants constituted 95 per cent) – amounted to only 11 per cent of total municipal grants and 8 per cent of what the provincial government considers its financial support of municipalities and local agencies.[8] The corresponding figures in 1976/7 are 13 per cent and 11 per cent. The general support grant, the most novel of the new grants, accounted for less than 3 per cent of grants in 1973/4, 4 per cent in 1974/5, and fell back to 3 per cent in 1975/6 following its conversion to a flat-rate scheme.

On the face of it, the figures in Table 10 provide little evidence in support of the coming 'deconditionalization' of provincial transfers of which some provincial officials spoke confidently only a few years ago (Ploeger, 1974). Indeed, one might equally well consider the restructuring of the unconditional grant program in the form of the property tax stabilization program of 1973 to represent a *strengthening* rather than a weakening of provincial influence over local decision-

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above – and in the form of explicitly differential payments, such as the pensioner credit and the special Northern Ontario general support grant. Once again age and location emerge as highly policy-relevant factors in analysing the distributive effects of government policies.

[7] To soften the blow for municipalities which had received larger percentage grants in 1974, all municipalities were guaranteed, for one year only, that they would receive at least 95 per cent of the general support grant received in 1974.

[8] These other payments indeed constitute support to local activities. For the most part, however, they do not enter directly into the local fiscal decision-making process the way direct provincial grants to municipalities do, so the emphasis here is put only on the grant component of 'total financial support.' Parenthetically, the total amount of money disbursed by the province to municipalities through unconditional grants was significantly less than that disbursed to individuals through tax credits (Ministry of Treasury, 1977a, 23).

TABLE 10

Provincial transfers to municipalities (Ontario, 1973-6) ($ million)

	1973/4	1974/5	1975/6[1]	1976/7[2]
Conditional payments	1663	1837	2294	2478
Education	1251	1331	1575	1715
Transportation	267	330	434	460
Social assistance	110	131	180	194
Housing	2	6	16	23
Environment	1	5	12	16
Health	9	8	12	15
Other	23	26	65	55
Unconditional payments	202	297	345	372
General support	49	85	79	96
Resource equalization	56	70	80	90
Police grants	25	42	71	73
Per capita grants	52	63	64	66
Northern Ontario grants	10	12	18	21
Other	10	25	33	26
Total grants	1865	2134	2639	2850
Payments to local agencies[3]	161	183	236	250
Other payments[4]	229	351	344	366
Total financial support	2555	2668	3219	3466

SOURCE: Ontario Budget, 1976, C-21.

NOTES:

1 Interim figures
2 Estimated
3 Includes library boards, homes for the aged, etc.
4 Includes teachers' superannuation fund, payments in lieu of taxes, etc.

making. As J.S. Dupré presciently noted, this attempt of the provincial government to alleviate the property tax 'burden' through increased grants really amounts to 'the provincialization of local decision making ... the question then becomes whether a democratic government can continue to bear the responsibility for raising ever larger revenues that are spent elsewhere' (Dupré, 1974, 625-6).[9]

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[9] Instead of 'can continue,' Dupré might well have said 'should continue' or, indeed, 'will continue.' See also the discussion of this point in chap. 2 above.

The most interesting feature of the PTS program was undoubtedly the attempt to link the general support grant to the rate of spending increase. As Dupré (1974, 624) noted, this link actually *weakens* local autonomy by increasing provincial influence over municipal spending and taxation. What is perhaps more interesting, however, is the question of whether this unusual grant formula actually had any effect on the rate at which municipal spending increased. An early analysis (Ward, 1973) suggested that because the fastest rates of expenditure growth were in the smallest and the largest cities (in 1969-70), the bulk of the grant would probably go to other governments. This commentator also noted, correctly, that 'different municipalities with different resources, in different stages of development and of different sizes will have varying rates of growth in municipal expenditure that have little to do with the prudence of the municipal council' (Ward, 1973, 5).

Nevertheless, as noted above, the provincial authorities clearly considered, at least initially, that the general support grant was effective in reducing property tax rates in 1973. Table 11 shows the distribution of this grant in 1973 in per capita terms by type of municipality, compared to total grants per capita. It is apparent from this table that, apart from the new regional municipalities, the largest grants were paid to small rural towns, townships and improvement districts, and to cities.[10] This table also suggests that, over all, total grants received were closely related to the general support grants received.[11]

Table 12 depicts the rate of growth of municipal expenditures from 1972 to 1973 and from 1973 to 1974. In 1972-3 the lowest rate of growth was in the restructured two-tier regional municipalities and the largest increases were in towns, villages, and townships. In 1973-4, on the contrary, the highest rate of expenditure growth was in the restructured two-tier areas, perhaps reflecting the high costs of newness, while the growth rates for cities, towns and townships were much lower.[12] As one might expect, there appears to be a strongly inverse

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[10] The regional municipalities probably received such low general support grants in per capita terms in 1973 primarily because their 1972 net general levy was, as a rule, so low. As Table 12 shows, their expenditure increase was such that they would have qualified for the maximum rate of the general support grant. In 1974, the province fixed the rate of the general support grant for several new regional municipalities at 7 per cent even though (as Table 12 suggests) they would have received considerably less than this percentage otherwise: perhaps over the two-year period the under- and over-payments, so to speak, may have balanced out in some politically relevant sense.

[11] Spearman's coefficient of rank correlation between the two grant columns is positive and significant (0.7804).

[12] Expenditures and expenditure growth rates are in per capita terms in Table 12, although the general support grant actually depended on the growth of gross municipal expenditures. Year-to-year population changes are not big enough to make much difference in the results, however.

TABLE 11

Distribution of general support grant payments, 1973

	Number of municipalities	General support grant per capita, 1973 ($)	Total Ontario grants per capita, 1973 ($)
Metro Toronto	7	7.94	63.70
Restructured two-tier areas	63	8.73	95.36
Cities	24	10.61	64.77
Towns			
Separated towns	6	5.84	56.56
5000 or more, in counties	37	3.69	35.79
less than 5000, in counties	50	4.33	48.06
5000 or more, in districts	10	17.18	78.23
less than 5000, in districts	25	11.30	67.89
Sub-total	128	5.30	43.40
Villages			
2500 or more, in counties	6	4.30	36.66
less than 2500, in counties	120	2.59	39.78
less than 2500, in districts	8	3.02	45.58
Sub-total	134	2.82	39.56
Townships			
5000 or more, in counties	49	2.48	32.06
2500 to 4999, in counties	102	1.82	41.44
less than 2500, in counties	228	2.05	63.88
5000 or more, in districts	2	38.77	133.30
2500 to 4999, in districts	6	14.12	72.34
less than 2500, in districts	107	8.90	90.82
Sub-total	494	3.25	49.03
Improvement districts	14	15.96	83.71
Total local municipalities	864	7.50	61.15

SOURCE: Calculated from Ministry of Treasury (1974).

relationship between the average per capita general support grant received by municipalities in each major group in 1973 and the average 1972-3 growth rate in municipal expenditures in each group. The fact that there is an almost equally strong inverse relationship between *total* per capita grants and the rate of expenditure increase, however, suggests the danger of drawing simple-minded conclusions about anything from data such as these.[13] It is clear that there are many factors other than expenditure growth rates related to grant payments and

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[13] In both cases, Spearman's coefficient of rank correlation was negative and significant.

TABLE 12

Growth rates of municipal expenditures, 1972-4

	No. of munici-palities 1972	Expendi-tures per capita, 1972 ($)	No. of munici-palities, 1973	Expendi-tures per capita, 1973 ($)	Growth rate of municipal expenditures 1972-3 (%)	No. of munici-palities, 1974	Expendi-tures per capita, 1974 ($)	Growth rate of municipal expenditures, 1973-4 (%)
Metro Toronto	7	404.32	7	425.74	5.30	7	471.92	10.85
Restructured two-tier areas	47	325.38	63	336.65	3.46	90	377.14	12.03
Cities	27	289.66	24	313.25	8.14	22	327.06	4.41
Towns								
Separated towns	6	244.07	6	263.31	7.88	6	303.58	15.29
5000 or more, in counties	40	256.38	37	284.15	10.83	22	296.59	4.38
less than 5000, in counties	51	210.24	50	230.43	9.60	45	254.75	10.55
5000 or more, in districts	12	247.70	10	296.47	19.69	10	327.11	10.33
less than 5000, in districts	29	229.55	25	210.47	−8.31	25	228.49	8.56
Sub-total	138	246.87	128	272.95	10.56	108	284.17	4.11
Villages								
2500 or more, in counties	6	218.07	6	234.66	7.61	4	164.43	−29.93
less than 2500, in counties	125	174.50	120	190.91	9.40	113	213.40	11.78
less than 2500, in districts	8	130.09	8	165.95	27.57	8	191.93	15.66
Sub-total	139	178.34	134	195.66	9.71	125	207.80	6.20
Townships								
5000 or more, in counties	51	200.38	49	217.72	8.65	40	211.00	−3.09
2500 to 4999, in counties	107	183.60	102	197.24	7.43	88	206.79	4.84
less than 2500, in counties	225	207.19	228	223.66	7.95	210	248.97	11.32
2500 or more, in districts	16	211.08	8	293.26	38.93	8	312.58	6.59
less than 2500, in districts	109	193.60	107	222.68	15.02	108	246.02	10.48
Sub-total	508	197.55	494	215.87	9.27	454	226.93	5.12
Improvement districts	16	260.80	14	270.54	3.73	13	291.61	7.79
Counties	-	-	-	-	-	27	66.54	-
Total local municipalities	882	301.97	864	325.16	7.68	846	372.19	14.46

NOTE: The number of municipalities in each category may vary from year to year owing mainly to the establishment of regional governments.

SOURCE: Calculated from Ministry of Treasury (1973, 1974, 1975), even more factors than grants that are related to expenditure growth rates. There is thus no way on the basis of simple observation of numbers like those in Tables 11 and 12 to determine whether or not the property tax stabilization program succeeded in stabilizing municipal property taxes.

MODELLING LOCAL REACTIONS TO FISCAL TRANSFERS

Fortunately, over the last few years, a substantial econometric literature has grown up directed specifically at determining the impact of intergovernmental fiscal transfers on the expenditures (and, in some cases, on the tax rates) of local governments. The remainder of this chapter considers the applicability of this literature to the problem at hand and applies and tests a model of the impact of unconditional grants on municipal expenditures and taxes in 1973 and 1974.

The basic aim of most econometric studies in this area is to explain in statistical terms how grants affect expenditures. Technically, if the partial derivative of expenditures with respect to grants ($\partial E/\partial \mathrm{GR}$) is less than zero, then an increase in grants has been shown, on average, to be accompanied by a *reduction* in expenditures (and hence, presumably, taxes). If this derivative is between zero and one, then increased grants are matched by increased expenditures, but by an amount less than the grants. This result is generally called ‘substitution,’ because in effect one result of the grant has been to substitute for local taxes. Again, as in the first case, increased grants are thus accompanied by *reduced* taxes. Finally, if this derivative exceeds one, then expenditures have increased by more than the amount of the grants and the result of the increased grant has, perhaps paradoxically, been to stimulate *additional* taxes.

Appendix E summarizes 37 recent econometric studies which bear on this question, including 5 studies employing Canadian data. Even a glance at this appendix makes it very clear that different studies have found the effect of grants on expenditures (and taxes) to fall into all of the ranges noted above. This striking lack of consensus in the results of these studies reflects differences in data, in statistical techniques, and in the underlying theoretical model which is being tested. Appendix E discusses briefly the evolution of some of the techniques and models employed over time. The issues which give rise to the greatest problems in this work are surprisingly simple – though still very difficult to deal with.

One such question, for example, concerns the variable to be explained: Should the dependent variable be total expenditures, or just expenditures from own funds (that is, expenditures exclusive of grants)?[14] The argument against using total expenditures is simply that some of these expenditures are made out of grant funds, so that this component of the dependent variable is perfectly correlated with the grant variable. Consequently, one should not be surprised that the coefficient on the grant variable in the model is found to be statistically significant. As Morss (1966, 9) noted in an early review article:

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[14] For a related difficulty in measuring municipal fiscal ‘imbalance,’ see Gillespie (1974, 562).

> Inasmuch as states and localities must spend virtually all of the federal aid they receive, it is not surprising to find that aid and expenditures move together in a 'statistically significant manner.' Indeed, using aid to explain expenditures is analagous to using taxes to explain expenditure in the sense that both aid and taxes are sources of funds. The fact that these variables turn out to have substantial explanatory power serves as little more than verification of the quite obvious fact that government receipts and expenditures are closely related.

Gabler and Brest (1967), in trying to solve this problem, ran total state and local expenditures on highways against the usual explanatory variables, but substituting for grants the specific aid *formula* used by the federal government.[15] Their results showed, as indeed one would expect, that the variables upon which federal aid was based were significant determinants of state and local expenditures. Osman (1968) took a different approach and ran expenditures from *own* funds against a number of independent variables, including grants. Again, it is not surprising that he found the partial derivative of expenditures from own funds ($\partial(E - \text{GR})/\partial\text{GR}$) with respect to grants to be significantly smaller than the partial derivative of total expenditure with respect to grants ($\partial E/\partial\text{GR}$) that he had calculated in an earlier study (Osman, 1966).

The correct choice of dependent variable in this exercise really comes down to what question is being asked. If one wants to know how a municipality's *own* expenditures react to transfers, then the dependent variable should be exclusive of grants. But if it is the response of *total* expenditures in which one is interested, then total expenditures should be used. Econometrically, it makes no difference which equation is estimated as long as the interpretation is correct.[16]

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15 A glance at the formulas in n. 4 and 5 above should suggest something of the problems with this approach – and these appear to be among the *simpler* formulas in Ontario grant programs!

16 An important related problem concerning the exogeneity of grants is discussed briefly in appendix E. In principle, the factors determining grants should probably be explicitly incorporated in the model or in some other way the fact that grants are in part determined by the same factors that determine expenditures should be explicitly taken into account. In practice, this problem has been handled in widely different ways – perhaps most often by ignoring it. In effect, most studies end up by treating grants as exogenous: for a more explicit attempt to deal with this problem, see Slack (1977), as summarized briefly later in this chapter.

Another simple question which has been widely discussed is whether cross-section or time-series data are most appropriate in modelling local fiscal reactions to grants. Cross-section analyses are in fact most often attempted because of the greater availability of data, but the results must be handled with care, for such studies really assume that 'the structure of the relationship, e.g., all constants and partial derivatives, is constant across units' (Gramlich, 1969b, 578). As Morss (1966, 101) noted, 'expenditure changes for a particular government unit can virtually always be predicted more accurately from its own history than from a collection of current relationships holding in government units with very different political and economic characteristics.'

The use of time-series data is itself subject to doubt for parallel (though not identical) reasons. Some studies have employed pooled time-series and cross-section data, thus meeting both sets of problems to some extent, though giving rise to others. On the whole, in this as in other areas of empirical research, it is not unfair to conclude that most analysts in the end simply try to do the best they can with the data to which they have access. As will be seen shortly, our own work is no exception to this rule.

Many of the early studies of local fiscal reactions to grants were offshoots of the wider family of expenditure 'determinants' studies and, like their parents, sometimes degenerated into a relatively mindless search for the highest R^2 (the amount of the total variation in the dependent variable that is explained by the independent variables).[17] This coefficient does not, however, provide any indication of *causation*, that is, of which variable influences which. That only two of the 22 determinants studies summarized in appendix E found that increased grants were associated with reduced expenditures, while six found that they were associated with increased taxes (and the rest were in between) thus in fact tells us very little. What is really needed is to postulate a formal theoretical model of the expected local fiscal response to grants and then to test this model against an appropriate body of data. Fortunately, in recent years a number of studies have followed this conceptually more satisfying path.

Most of these recent models essentially assume that governments select the amount of public and private expenditures that will maximize the utility of the community subject to a budget constraint (for example, Henderson, 1968 and Gramlich, 1968). Other recent formulations have considered, probably more realistically, that politicians maximize votes (Smith, 1968) and school boards maximize their own preferences, assumed to depend on such factors as demographic variables and the current school tax rate (Stern, 1973).

Although all these models constitute a substantial improvement over the earlier determinants studies, they are still somewhat deficient in that they fail to distinguish explicitly the 'price' and 'income' effects of grants. Inman (1971) and McGuire (1975) have, however, developed models which test the impact of grants on expenditures distinguishing these two effects. Inman, for example, postulated a rather complicated model in which a 'leadership preference function' is maximized subject to the appropriate budget constraint. His results on cross-section data suggested that grants had no significant effect on taxes and borrowing but did increase expenditures by an amount less than the grant.

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[17] For an extensive review of 'determinants' studies in general see Bird (1970b, appendix B).

All in all, as even this brief discussion should have clearly indicated, there is certainly no consensus in the literature on whether grants increase expenditures by more or less than the amount of the grant (see appendix E). Different models and different data produce different results. There have, for example, been five previous Canadian studies attempting to analyze the impact of grants on the expenditures of lower-tier governments. Of these, only three studies have actually derived results from a theoretical model - in all three cases, a constrained utility maximization model quite similar to those of Gramlich and Henderson.

The two straightforward determinants studies were done by Michas (1969) and Bodkin and Conklin (1971). Michas considered combined provincial and municipal expenditures as a function of federal grants (and other variables) using pooled cross-section and time-series data, but reached no significant results. Bodkin and Conklin (1971), using cross-section data for Ontario municipalities in 1961 and 1966, found, however, that grants increased expenditures by an amount less than the grant. In terms of taxes, these results imply that increased provincial grants were associated with reduced municipal taxes.

The first of three formal models estimated for Canada found similar results for the 10 provinces over the 1947-65 period (pooled time-series and cross-section data) so far as unconditional grants were concerned, but suggested that conditional grants actually stimulated provincial expenditures, that is, raised taxes (Maley, 1971). Hardy (1976), using 1948-70 time-series data, similarly found the provincial expenditure response to federal grants received by Ontario and New Brunswick to be greater than one for most expenditure categories. Finally, in the only published model on the response of Ontario municipalities to grants, Auld (1976) found, using both time-series data for 1953-70 and pooled cross-section and time-series data for 15 cities in 1969 and 1970, that grants always increased expenditures, but that whether they increased them by more than the amount of the grant or not varied widely among expenditure functions.

IMPACT OF THE PROPERTY TAX STABILIZATION GRANT

This brief review of some previous work on local fiscal responses to grants sets the stage for the model used here. This model, which is developed in detail by

Slack (1977), considers the impact of conditional and unconditional grants on the expenditures of Ontario municipalities, using pooled cross-section data for upper-tier municipalities in Ontario in 1973 and 1974. Because the PTS program was introduced only in 1973 and data are only available for that year and 1974, this was the only data base available. Although this study does not separate out the PTS grants from other unconditional grant programs, the assumption that the response to this program is the same as the response to unconditional grants in general seems reasonable since the PTS grants constituted most of the unconditional grants in those years (see Table 10). The results of this study can therefore be used with some confidence as an indication of the probable impact of the PTS program on municipal expenditures.

The model assumes that politicians maximize the utility of citizens in the municipality, subject to a budget constraint. Utility is assumed to depend on municipally provided goods and services on the one hand and on all other goods and services, both public and private, on the other. The resulting system of demand equations may be represented in general form as follows:

$$E = E(Y, \text{GRU}, \text{OR}, P(1-M)),$$

$$t_R = t_R(\text{AV}, Y, \text{GRU}, \text{OR}, P(1-M)),$$

$$t_R\text{AV} + \text{OR} + \text{GRU} + \text{GRC} = E.$$

The first equation shows that total municipal expenditures are a function of income Y, unconditional grants GRU, other miscellaneous local revenues OR, and the price to the municipality of the aided good ($P(1-M)$) as altered by the matching rate M of conditional grants. The second equation shows that the tax rate t_R is a function of the same variables plus the assessment base AV. Finally, the third equation is the budget constraint: total expenditures must equal total revenues, consisting of municipal taxes, other revenues, unconditional grants, and conditional grants GRC.

As shown in Appendix F, four socioeconomic variables are also included in the expenditure and tax equations to reflect differences in the demand for services across municipalities arising from influences other than price and income. These variables are population POP, the ratio of residential to total taxes, or the residential tax burden RTB, the location of a municipality in Northern Ontario DUM, and the level of school taxes TS. The rationale for choosing these variables is explained in detail in Slack (1977).

Finally, an additional equation is added to the above system of equations to explain unconditional grants:

$$\text{GRU} = \text{GRU}([(E - E_{-1})/E_{-1}], [t_R\text{AV}]_{-1}, \text{POP}, \text{DUM}).$$

This equation shows that unconditional grants are determined by the percentage increase in expenditures over the previous year, the previous year's property taxes, the size of the population, and the location in Northern Ontario. This grant equation approximates the complicated formulas that are actually used to determine unconditional grants (as illustrated in notes 4 and 5 to this chapter). This equation is added on to the system of equations because it is the *province* which sets the grant formulas and thereby determines the amount of grant, whereas the model derived here is for the *municipal* budget decision-making process. These grants are endogenous to the system because expenditures affect grants and grants affect expenditures, but the decision on the amount of grant is not endogenous to the *municipal* budgetary process. What has been done, therefore, is to separate local decisions from provincial decisions and then include both in the system of equations to take account of their obvious interrelation.

Appendix F contains the estimating equations for this model for two functional forms (Stone-Geary and translog), the results for the pooled data, and information on the data used. A much fuller account appears in Slack (1977). The results are reported here for only one model (Stone-Geary) in order to keep things relatively simple.

The coefficient on the unconditional grant variable, for example, indicates that a $1.00 increase in unconditional grants in 1973-4 was, on average, associated with an increase in municipal expenditures of only $0.014. The coefficient on the conditional matching grants variable, in contrast, indicates that an increase in grants of $1.00 was associated with an expenditure increase of $2.28, other things being equal. Income and other revenue also appeared to have a very small positive and significant effect on expenditures, an increase in income or other revenue of $1.00 being matched by increased expenditures of $0.014. The price elasticity of demand for municipal expenditures was determined to be -1.78, indicating a fairly elastic demand for municipal expenditures.

Finally, the response to the socioeconomic variables included in the model was as follows: each additional resident corresponds to an increase in municipal expenditures of $77.00;[18] an increase in the residential tax burden by 1 per cent corresponds to reduced expenditures of $143,645; municipalities in Northern Ontario 'demand' on average additional expenditures of $1,830,570; and an increase in school taxes of $1.00 is matched by an increase of $1.29 in the

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18 The coefficient on the population variable (0.077) must be multiplied by 1000 because the dependent variable (E) is in $,000 while POP is the actual number. There are similar scaling problems with the coefficients on RTB and DUM. All the values reported in this paragraph are for mean values. These values have been derived from the equations in appendix F.

demand for municipal expenditures. All these results accord with theoretical expectations and, indeed, with common sense, except perhaps the last; a possible explanation is that higher education expenditures (school taxes) are associated with higher municipal expenditures in general.

As shown in appendix F, and in more detail in Slack (1977), the estimated coefficients are quite sensitive to the functional form used. When results were derived from the translog model, for example, the expenditure response to unconditional grants was \$0.051, while the response to conditional matching grants was only \$0.428. This result for conditional grants – suggesting that these grants too resulted in substitution (that is, tax reductions) – is clearly in conflict with the Stone-Geary result which indicated stimulation for conditional grants. The results for unconditional grants, however, both show substantial substitution, although the magnitude of the expenditure response is different.

For reasons discussed in appendix F no direct estimate of the effect of the PTS grant, or grants in general, on property tax rates was actually made. Nevertheless, this exercise clearly indicates that increases in unconditional grants received by Ontario municipalities in 1973 and 1974, including the PTS grant, were associated with lower tax rates. The conclusion emerging from this simple model of the municipal fiscal decision-making process in Ontario municipalities is thus that higher provincial unconditional grants increased local expenditures but, because the increase in expenditures was less than the amount of the increased grants, local tax rates were reduced.

This conclusion appears to agree both with the inferences drawn by provincial politicians (and cited above) and with how some municipalities themselves viewed the effects of the PTS grant. In 1973, for example, the Address on the Operating Budget of the City of Toronto contained these words: 'Further assistance announced by the Provincial Government in its budget presentation on April 12th will have the effect of enabling us to pass on a tax rate reduction of 1.5 mills to the City of Toronto ratepayers.' Similarly, in 1974 the same source noted: 'Last year a windfall from the Province in the form of a \$5.4 million general support grant as part of the government's Property Tax Stabilization Program, resulted in a tax reduction. In order to qualify for the full grant we had to hold our spending to an 8 per cent increase over 1972, which we did.'

Since the property tax stabilization program was introduced in April of 1973, after most Ontario municipalities had already agreed upon their budget for that year, it is not very surprising that a municipality would decide to maintain the level of expenditures that had already been budgeted for and use this 'windfall' to reduce mill rates, as the first statement says happened in Toronto. In 1974, however, the City of Toronto tax rate increased by 1.5 mills, or precisely the same amount by which it had been reduced the previous year. Statements such as those quoted are thus of little use in determining the impact of the PTS grant on the tax rate of any given municipality. One really has to know what the tax rate *would have been* in 1974 in the absence of the PTS grant - a hypothetical question which can only be answered through a formal hypothesis-testing approach such as that described above.

If the model tested here is valid, the conclusion which emerges from it is that the PTS grant, avowedly designed to reduce property tax rates, appears to have succeeded in its aim. This conclusion is not inconsistent with results provided by some other studies as outlined earlier in this chapter, but the acceptance of it obviously does require a certain degree of faith in the model that has been postulated.

In some respects, it is clear that this model is over-simple - for example, no account is taken of the fact that matching grants often subsidize particular factor inputs. Because the model does not allow for factor substitution by the municipality, it is thus implicitly assumed that the production techniques employed in producing municipal outputs are unaffected by grant programs. On the other hand this model has considerable virtues compared with many others found in the literature: for example, unconditional grants are treated as endogenous, and conditional grants are assumed to have both a price effect and an income effect.[19] Moreover, the assumption in the model that municipalities make simultaneous tax-expenditure decisions seems entirely appropriate for Ontario:

> Municipal corporations and their associated local boards are expected each year to draw up estimates of their expenditures on current account and of total revenues needed to balance the budget. The balancing item, after deducting expected revenues from provincial grants and sundry local sources, is a combination of real property and business taxes. A mill rate is struck which, if the estimates are accurate, will bring revenues and expenditures as nearly into balance as possible (Ontario Committee, 1967, vol. 2, 448).

Ontario municipalities also face statutory constraints on borrowing on current account. Temporary borrowing to meet expenditure requirements is only allowed pending the receipt of taxes. If the amount borrowed exceeds 70 per cent of uncollected revenues, approval from the Ontario Municipal Board is required. Consequently, municipalities must, in effect, simultaneously choose a tax rate and an expenditure level which will balance their budget, exactly as postulated in the model.

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[19] The importance of these refinements is suggested by the fact that in an earlier draft of the present study, when a modified version of the Strauss (1974) model was used to estimate the impact of the PTS grant, the grant was actually found to be *stimulative* (with a $1.00 increase in the grant being accompanied by a $1.01 increase in municipal expenditures) Despite the problems with the results reported above, we have much more confidence in them than in this earlier exercise which, for example, treated all grants as exogenous.

There is little doubt that the small model reported on here could be improved upon in many ways if much more time and effort were devoted to the task. For present purposes, however, it appears we can safely conclude that what evidence there is suggests that it is likely that the property tax stabilization program in fact succeeded in stabilizing property tax rates in Ontario. Even if the PTS grant succeeded in its stated aims, however, it is far from certain, in light of the discussion earlier in the present study, whether this success was a good thing or a bad thing.

9
Conclusion

The original aim of this study was to investigate the effects, in particular the effects on income distribution, of the two major programs launched in Ontario in the 1970s with the avowed object of lessening the perceived regressive burden on Ontario residents of the residential property tax. The conclusion which emerges from this detailed examination of the property tax credit and the property tax stabilization program is that although the credit appears to have done little to resolve this problem - assuming it existed in the first place - the PTS program may indeed have reduced property tax rates somewhat.

As we have seen, it is not possible to say with much confidence whether or not the existence of either or both of these programs for residential property tax relief has led to a reduction in property taxes on Ontario residents in the sense that the property tax is now lower than it would be if these programs did not exist. On the whole, however, our suspicions - supported by what little evidence we have been able to gather - are that the property tax stabilization program (essentially an unconditional provincial grant to municipalities) has more likely reduced than increased property taxes and that the property tax credit may have had some slight influence in the opposite direction by reducing citizen resistence to property tax increases. It may well be, as suggested below, that the 'relief' programs may have served the people of Ontario better if they did indeed result in an increase in property taxes rather than a decrease; but it remains an open question what their effects in this respect actually were.

Even if this question could be answered with confidence, only the initial impact of these policies would have been considered. In order to determine their final effect on the distribution of income, one must be able to estimate the ultimate incidence of such a change in the level of property taxes in Ontario. This question was explored in depth both in theory and through some very tentative quantitative speculations derived from theory. The general answer we reached was, again, that one could not say much with confidence about the incidence of the property tax in Ontario. Nevertheless, our general evaluation was that in all likelihood the existing residential property tax in Ontario was probably not very regressively distributed anyway, and that the same would likely be true of any increase in the level of the tax. It follows, of course, that even if the relief programs succeeded in their stated objective of reducing property taxes, the poor would probably not benefit much from this 'success' anyway.

Closer consideration of the rationale behind these programs, particularly the property tax credit, suggests, however, that the real concern in this area may be not with relieving low-income residents in general from the perceived regressive effects of the property tax but rather with transferring increased amounts of public monies to certain more limited social groups, notably the elderly. It is undeniable that aged homeowners in particular may find themselves in an unpleasant vise between a fixed income and rising living costs, including property taxes. The usual economist's proposal to relieve such 'liquidity squeezes' by tax deferral programs appears to be no more popular in Ontario than anywhere else. Nevertheless, it is still clearly better in principle to offset any such limited (and, in an economic sense, transitory) problem by means of an equally limited and transitory program targeted on the relevant group. Some kind of limited tax deferral program is definitely a more efficient and more equitable way to cope with such problems than such a general device as the property tax credit.

There is no doubt, of course, that the property tax credit does channel a fair amount of money to those in 'need' (in terms of the current liquidity definition of ability to pay which appears to carry such weight with Canadian policymakers). The trouble is that it also gives a lot of money to others, when it is extremely difficult to see any equity case for doing so once the old, simple-minded views of property tax incidence have been rejected. When viewed on its own as an income transfer program – rather than as an offset to some supposed property tax 'burden' – it is hard to conclude that the present credit program makes much sense, primarily because it distributes so much of its largesse to those who, by definition, are more wealthy than are many non-recipients of this bounty. On the other hand, the *principle* of the tax credit method of redistributing income may be much more commendable than is the present practice.

To sum up, the property tax credit does not seem likely to do the job it was set up to do, or at least not very effectively. But in itself this conclusion does not necessarily condemn this program, for this job probably did not really exist in the first place. When considered apart from their role in the quest to offset the presumed regressivity of the property tax, both programs considered here have both merits and problems. The property tax stabilization program, for example, is in essence an unconditional grant: those who favour local autonomy will therefore look more kindly on it than those who believe in stronger central direction of local spending. Whether or not the grant increases property taxes is essentially irrelevant to the real arguments for and against it. Similarly, the property tax credit - as indeed the provincial government originally emphasized - is in essence a kind of 'negative income tax' (an income support plan implemented through the income tax mechanism, with the amount of support declining as income rises). In view of the strong arguments in favour of following this path to rationalize the present morass of income-transfer programs in Canada, it may well prove better to build on this base, rather than suppress it because its present distributive effects do not make much sense. Again, the relationship of the property tax credit received by any household to the property taxes 'ultimately' borne by that household is both an unknowable and, for most purposes, an irrelevant matter once these more important issues are brought into focus.

The limited appraisal in this study of a limited range of issues arising in recent years in the context of Ontario's complex provincial-municipal system thus yields no clear conclusion. It does, however, demonstrate quite clearly how very small is the information base upon which policy edifices are commonly erected in this field - as, alas, in most others!

Apart from the tentative conclusions on the property tax credit and the property tax stabilization program suggested above, perhaps the major conclusion emerging from this study is that the property tax is probably by no means as bad a tax as it has long been painted. There is still a lot of life in this oldest of man's fiscal institutions. Unconditional grants may come and go; tax credits may wither away or develop (at last!) into a rational transfer system; but the property tax will probably go on forever, and rightly so.

APPENDIX A

Empirical studies of property tax capitalization

In recent years a number of empirical studies have been carried out, largely in the United States, on the extent to which variations in property tax rates within and among taxing jurisdictions have been capitalized in lower prices. Most of these studies are summarized in Table A.1. These studies, like all empirical work in economics, have encountered numerous conceptual and statistical problems. While some of these difficulties have been resolved in the more recent studies by means of more explicit specification of the hypothesis to be tested, the use of more disaggregated data, and more careful econometric techniques, the results of these studies will doubtless be further improved in the future. Most recent studies have allowed for the extent to which benefits accruing to property from municipal expenditures may offset taxes, and have focused on the question of whether *net* property tax differentials are capitalized in land values.

Despite the growing uniformity and sophistication of these studies, their results are still not in complete agreement. Nevertheless, the bulk of the evidence to date suggests that differentials in the effective rates of property taxes, whether within or across jurisdictions, are often capitalized, sometimes to a significant extent. On the whole, then, the theoretical proposition that higher property taxes mean lower property prices receives some support from these studies. Some of these studies also suggest that a substantial part of the tax on rented residential properties is borne by landlords and is therefore *not* passed on in the form of higher rents (Orr, 1968; Gustely, 1974; Black, 1974).

It should certainly be possible to do more careful and systematic work on property tax capitalization in Canada, but no such effort has been made in the present study owing to limitations of time and resources. The required data (on

TABLE A.1

Summary of empirical studies of property tax capitalization

Author	Data	Results	Comments
Cross-jurisdiction differentials			
Jensen (1931)	15 US counties, 1919-24	Strong evidence of capitalization of farmland values	Tabular presentation only
Daicoff (1967)	20 townships, 3 cities in Washtenaw County, Michigan 1951-7; also individual sales data	No evidence of capitalization	No allowance for price level changes or public service differences
Woodard and Brady (1965)	238 farms in Ohio and Indiana, 1962-3	Strong evidence of capitalization	Serious estimation problems (omitted variables, multicollinearity)
Moody (1973)	1300 single-family residences in San Francisco and San Mateo County, 1962	Evidence of capitalization	Includes study of effects of improved public transit on property values
Orr (1968)	31 municipalities in Boston area, 1959	Evidence of capitalization; little effect on rents	See Coen and Powell (1972), Heinberg and Oates (1970), (1972) and Orr (1970), (1972) for further discussion
Oates (1969), (1973)	53 municipalities in northeastern New Jersey, 1960, 1963	Evidence of almost full capitalization	Incorporates public service level factor
Pollakowski (1973)	19 cities in San Francisco area, 1960, 1963	Insignificant results	Basically a critical comment on Oates (1969); model found very sensitive to specification
Edel and Sclar (1974)	Municipalities in Boston area, 1930, 1940, 1950, 1960, 1970	Evidence of capitalization	Evidence less strong than Oates (1969); capitalization found to decrease over time
Hyman and Pasour (1973a and b)	106 incorporated towns in North Carolina, 1970	Little evidence of capitalization	For discussion see Cowing (1974) and Hyman and Pasour (1974)

TABLE A.1 *continued*

Summary of empirical studies of property tax capitalization

Author	Data	Results	Comments
Gustely (1974)	Cities and towns in Syracuse area, 1970	Evidence of capitalization; stronger for school taxes than for other taxes; especially in urban areas; little effect on rents	More disaggregated than other studies
Within-jurisdiction differentials			
Wicks, Little and Beck (1968)	Missoula County, Montana, 1965-7	Evidence of capitalization	
Smith (1970)	San Francisco, 1967	Evidence of capitalization	
King (1973)	1892 single-family homes, New Haven, 1967-9	Evidence of capitalization	
Wales and Wiens (1974)	1800 sales of improved residential property, Surrey, BC, 1972	No evidence of capitalization	Result attributed in part to imperfections in housing market
Church (1974)	957 residences in Martinez, California, 1967-70	Evidence of over-capitalization	
Black (1974)	Sample of 18,000 residential transactions, Boston, 1950, 1960	Evidence of partial capitalization for rental housing	
Noto (1976)	17,300 single-family dwelling units sold in San Mateo, California, 1971-3	Evidence of capitalization	Results derived from consumer utility maximization model

house characteristics, accessibility, and so on) appear to be available, at least for Toronto, but it would be a major, and separate, study to assemble these data and test for the existence of tax (and service) capitalization effects.

In the absence of such a separate study, we have simply assumed here that the currently prevailing wisdom on the existence of at least partial capitalization of property taxes on both owner-occupied and rental housing can be carried over to Ontario, despite the fact that the only published capitalization study using

Canadian data, by Wales and Wiens (1974) on Surrey, BC, is one of the few to find no evidence of capitalization. One thing which the existing studies make very clear is that careful specification of the housing market in the particular area studies is needed before reaching any conclusion of the precise degree of capitalization – contrast, for example, the studies of Boston by Orr (1968) and Black (1974). Province-wide generalizations on the nature and importance of capitalization thus seem as unlikely to be warranted as similar generalizations on property tax incidence in general (see chapter three).

APPENDIX B

Canadian and US studies of property tax incidence

Table B.1 summarizes the principal characteristics of the various quantitative studies on the incidence of the residential property tax in Canada, while Tables B.2 and B.3 present the principal results of these studies. Although only the assumptions on the residential part of the tax are shown in Table B.1, the results in Tables B.2 and B.3 are for the tax as a whole, unless otherwise indicated: as the study by Clayton (1966) suggests, the pattern is not very different. Almost without exception, all studies suggest that the property tax is regressive throughout, with the 'official' studies for Manitoba and Ontario showing particularly high regressivity in the lowest income classes, largely because of the much narrower income concept that they employ (see chapter five).

The methodology employed in all these Canadian studies was derived largely from that developed in similar studies in the United States, notably the pioneering study by Musgrave (1951). Table B.4 summarizes three of the most recent US studies employing variants of this traditional methodology. Although each of these studies employed somewhat different income concepts and shifting assumptions, they all showed the property tax to be regressive throughout virtually all income classes, to varying degrees. These results of course reflect the fact that the same incidence model was used as in the Canadian studies.

In contrast, several other recent US studies have estimated the property tax as a percentage of income using assumptions closer to the new view of property tax incidence. Table B.5 summarizes several of these studies. While subject to many of the same conceptual doubts as the quantitative estimates employing the traditional incidence methodology, the studies in Table B.5 are sharply different from all those in the earlier tables in this appendix in one key respect: they show

TABLE B.1

Summary of studies of residential property tax incidence in Canada

Author	Year of estimate	Incidence assumptions		Allocation basis	Income concept	Remarks
Goffman (1962)	1957	Owner-occupied Rented	– on homeowner – land portion on landowner – improvements on tenants	Value of owner-occupied homes	Personal income plus imputed corporate profits	
Clayton (1966)	1958	Owner-occupied Rented	– on homeowner – on tenant		Five different income concepts	
Gillespie (1964; 1975)	1961, 1969	Owner-occupied Rented	– on homeowner – land portion on landowner – improvements on tenants, landlords, or equally split (later study excludes incidence wholly on owners)	Value of owner-occupied homes Net rental income Rent expenditures	Two broad income concepts (later study varies concept slightly)	
Johnson (1967)	1951	Owner-occupied Rented	– on homeowner – land portion on owner – improvements on tenants	Value of owner-occupied homes Net rental income Rent payments	Adjusted personal income	Ontario only
Newfoundland (1972)	1967		Not clear	Not clear	Family income	St John's only

Maslove (1972)	1969	Owner-occupied – on homeowner Rented – land portion on landowner – improvements on tenant	Property taxes and assessment Other investment income Rent payments	Two broad income concepts	
Ministry of Treasury (1972; 1976c)	1968, 1975	All residential taxes paid by occupants	Property assessment records matched with income tax returns	Gross income reported on returns	Residential property tax in Guelph only; later study for whole province
Manitoba (1975)	1973	All taxes paid by occupants	Property assessment records matched with income tax returns	Income reported on tax returns	Manitoba only

TABLE B.2

Estimates of the incidence of the property tax in Canada, various years (income classes in $,000; other figures in per cent)

Goffman (1962)		Clayton (1966)[1]		Gillespie (1964)[2]		Gillespie (1975)[2]		Maslove (1972)[3]	
Income class	Tax as % of income	Income class	Tax as % of income	Income class	Tax as % of income	Income class	Tax as % of income	Income class	Tax as % of income
Less than 1	6.9	Less than 2	8.4	Less than 2	8.0	Less than 2	7.6	Less than 2	11.6
1–2	4.7	2–3	4.7	2–3	4.9	2–3	6.3	2–3	7.6
2–3	4.0	3–4	4.3	3–4	4.5	3–4	5.1	3–4	6.4
3–4	3.5	4–5	4.0	4–5	4.3	4–5	4.8	4–5	5.6
4–5	3.5	5–7	3.7	5–7	4.0	5–6	4.6	5–6	5.0
5–7	3.4	7–10	3.1	7–10	4.0	6–7	4.8	6–7	4.5
7 and over	3.4	10 and over	2.3	10 and over	4.1	7–10	4.7	7–8	4.5
						10–15	4.7	8–9	4.6
						15 and over	3.9	9–10	4.4
								10–11	4.2
								11–12	4.0
								12–15	3.8
								15 and over	3.5

NOTES

1 Residential property tax only. Income concept is ‘broad disposable income, adjusted.’

2 Assuming tax on rented residential property is shifted to tenants. Income concept is ‘adjusted broad income.’

3 Total of municipal and provincial property taxes. Income concept is ‘full income.’

TABLE B.3

Other estimates of the incidence of the property tax in Canada, various years (income classes in $,000; other figures in per cent)

Johnson (1967)[1]		Newfoundland (1972)[2]		Manitoba (1975)[4]		Ministry of Treasury (1972)[5]		Ministry of Treasury (1976c)[6]	
Income class	Tax as % of income	Income class	Tax as % of income	Income class	Tax as % of income	Income class	Tax as % of income	Income class	Tax as % of income
Less than 2	7.0	Less than 2.5	5.0	Less than 2	18.3	Less than 2.5	18	Less than 1.0	51.0
2–3	3.9	2.5–3.0	3.7	2–5	6.3	2.5–3.0	10	1.0–2.0	14.4
3–4	4.1	3.0–3.5	6.4	5–8	4.1	3.0–3.5	8	2.0–3.0	10.1
4–5	3.8	3.5–4.0	–[3]	8–12	3.8	3.5–4.0	7	3.0–4.0	8.1
5–7	3.6	4.0–4.5	2.7	12–20	3.2	4.0–4.5	7	4.0–5.0	6.7
7–10	3.2	4.5–5.0	2.5	20 and over	2.2	4.5–5.0	6	5.0–6.0	6.1
10 and over	3.4	5.0–5.5	1.2			5.0–5.5	5	6.0–8.0	5.9
		5.5–6.0	0.8			5.5–6.0	5	8.0–10.0	4.1
		6.0–6.5	1.4			6.0–6.5	5	10.0–12.0	3.9
		6.5–7.0	1.8			6.5–7.0	5	12.0–15.0	3.4
		7.0–8.0	1.9			7.0–7.5	4	15.0–20.0	3.3
		8.0–10.0	1.7			7.5–8.0	4	20.0–25.0	3.7
		10 and over	1.0			8.0–8.5	4	25.0 and over	3.0
						8.5–9.0	4		
						9.0–9.5	4		
						9.5–10.0	4		
						10–12	4		
						12–15	4		
						15–20	3		
						20–25	3		
						25–50	2		
						50 and over	1		

NOTES:

1 For Ontario

2 For owners only: incidence for tenants shows similar pattern. For City of St John's

3 Not available

4 For Manitoba

5 For Guelph

6 For Ontario; property tax borne by tenants assumed to be 20 per cent of rent paid and 1975 property taxes estimated on the assumption that property taxes increased by 6.6 per cent from 1973 to 1974 and 10.1 per cent from 1974 to 1975.

TABLE B.4

Traditional estimates of the incidence of the property tax, United States, various years (income classes in $,000; other figures in per cent)

Netzer (1966)[1]		Musgrave *et al* (1974)[2]		Pechman and Okner (1974)[3]	
Income class	Property tax as %	Income class	Property tax as %	Income class	Property tax as %
Less than 2	7.4	Less than 4	6.7	Less than 3	6.5
2–3	5.1	4.0–5.7	5.7	3–5	4.8
3–4	4.7	5.7–7.9	4.7	5–10	3.6
4–5	4.9	7.9–10.4	4.3	10–15	3.2
5–7	4.0	10.4–12.5	4.0	15–20	3.2
7–10	3.7	12.5–17.5	3.7	20–25	3.1
10–15	4.2	17.5–22.6	3.3	25–30	3.1
15 and over	4.1	22.6–35.5	3.0	30–50	3.0
		35.5–92.0	2.9	50–100	2.8
		92 and over	3.3	100–500	2.4
				500–1000	1.7
				1000 and over	0.8

NOTES

1 Money income. Tax on owner-occupied single family structures borne by occupiers; tax on rental and multi-family structures borne in proportion to rent paid; tax on residential land borne in proportion to rental income; non-residential tax partly borne by owners.

2 Broad income (including accrued asset gains). Tax on owner-occupied housing borne by owners and on rental housing by tenants; non-residential tax half shifted to consumers and half borne by all asset holders in proportion to capital income.

3 Broad income (different from (2)). Tax on land borne by landowners; tax on all structures borne in proportion to housing expenditures and consumption.

the property tax to be progressive throughout much of the income range (though the Ladd study, in particular, continues to show regressivity in the lowest income classes).

As noted in chapter four, all that these quantitative estimates really do is simply to *illustrate* what the distribution of the tax burden would be *if* the incidence assumptions were true. The numbers in Table B.5 therefore have no more inherent significance than those in the other tables. What they do suggest clearly, however, is the importance of the strong version of the traditional incidence assumptions in producing the conventional view that the property is a regressive tax. Where these assumptions are called into question, so are the numerical estimates – even though the latter are all too often incorrectly used to *support* the assumptions from which in fact they derive.

TABLE B.5

New estimates of the incidence of the property tax, United States, various years (income classes in $,000; other figures in per cent)

Pechman and Okner (1974)[1]		Musgrave *et al* (1974)[2]		Ladd (1973)[3]	
Income class	Property tax as %	Income class	Property tax as %	Income class	Property tax as %
Less than 3	2.5	Less than 4	2.5	Less than 3	7.2
3–5	2.7	4.0–5.7	4.4	3–5	5.4
5–10	2.0	5.7–7.9	2.9	5–10	3.6
10–15	1.7	7.9–10.4	2.3	10–15	2.6
15–20	2.0	10.4–12.5	2.0	15–20	2.9
20–25	2.6	12.5–17.5	2.7	20–25	3.7
25–30	3.7	17.5–22.6	3.3	25–50	5.7
30–50	4.5	22.6–35.5	5.6	50–100	14.1
50–100	6.2	35.5–92.0	7.2	100–500	22.4
100–500	8.2	92 and over	9.9	500–1000	24.5
500–1000	9.6			1000 and over	18.2
1000 and over	10.1				

NOTES

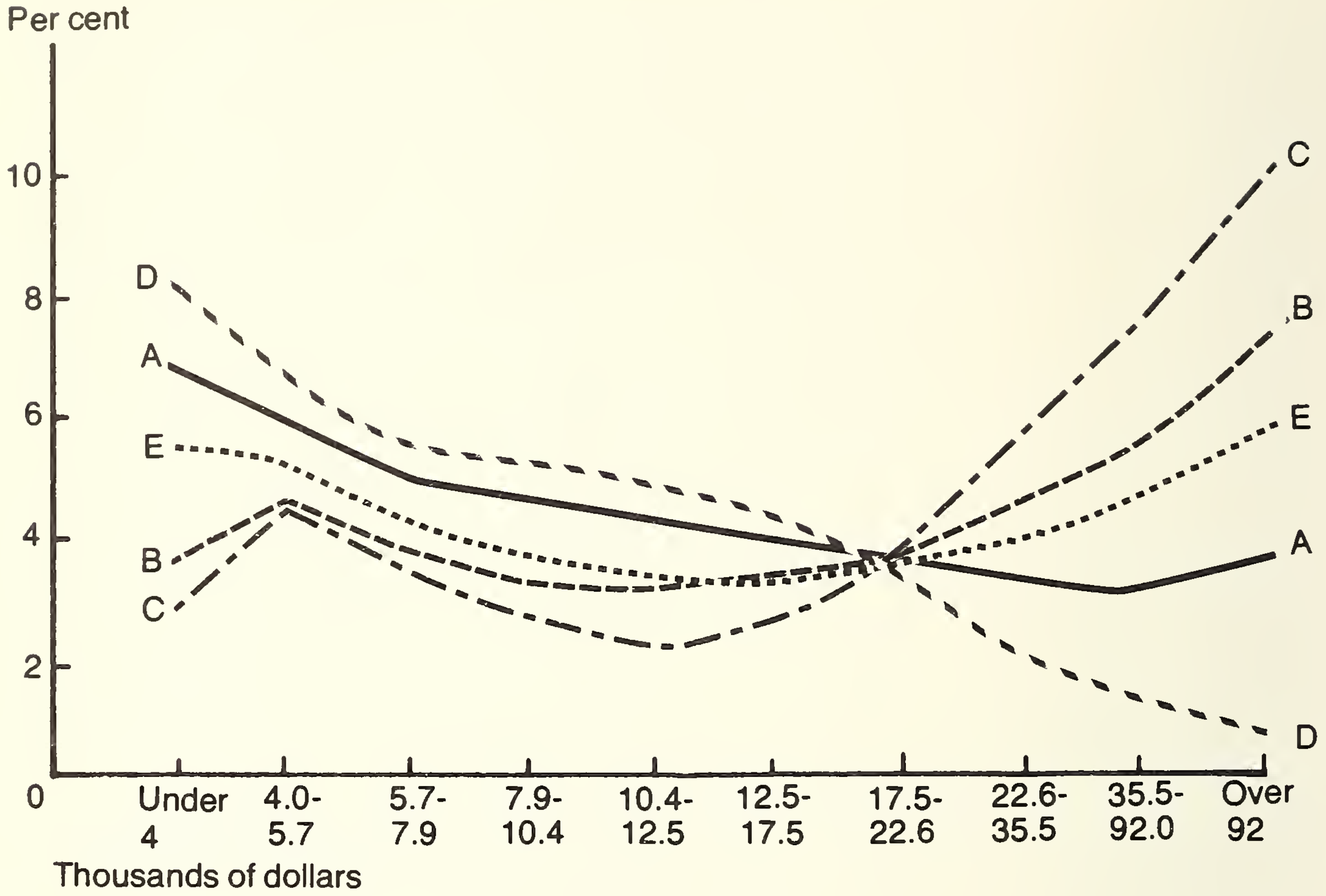
1 All taxes borne in proportion to property income in general. See also note 3, Table B.4

2 All taxes allocated in proportion to total income from capital. See also note 2, Table B.4

3 Tax on land borne by landowners; taxes on improvements borne by income from capital

The fact that estimates from two US studies appear in *both* Tables B.4 and B.5 simply reinforces this point. Indeed, the Musgrave, Case, and Leonard (1974) study presents three other incidence estimates in addition to those shown in these tables. Figure B.1 depicts the burden of the property tax under all five sets of assumptions in this study. The uncertain state of the art could not be made plainer than by this chart – which, it should perhaps be noted, is simpler than it might be, because it ignores the (possibly) different incidence of that portion of the tax which affects land rather than improvements (see Ladd, 1973).

Figure B1
Property taxes as a percentage of total income (United States, 1968).



Assumptions

A Non-residential ($^1/_2$ consumers, $^1/_2$ capital income); residential (homeowners, renters)
B Non-residential and rental residential (capital income); owner occupied (homeowners)
C All (capital income)
D Non-residential (consumers); residential (homeowners, renters)
E Non-residential (capital income); residential (homeowners, renters)

Source: Musgrave, Case and Leonard (1974)

APPENDIX C

Construction of incidence estimates for Ontario

The first step necessary is to divide property taxes into the components needed for the incidence exercise: this is done in Table C.1. The 'residential' component of the Ontario property tax has been estimated at 86 per cent of total 'residential and farm taxation,' a proportion similar to that used by Johnson (1967), Gillespie (1964), and Maslove (1972). Available information does not permit the breakdown of farm taxation into residential and non-residential portions.

The second step is to establish an income distribution series. While a good deal of refinement is of course possible in this area, all that has been done here is to distribute 'total personal income' for 1969, $25,679 million, (Ministry of Treasury, 1976a), by income class according to the 'money income' series in the 1970 Survey of Consumer Finances. 'Total personal income' is the sum of wages and salaries, transfer payments, net income of farm and non-farm unincorporated businesses, interest, dividends, and net rental income of persons.

The resulting distribution, while obviously crude, is surprisingly similar to the 'post-government income' series derived for 1961 in the earlier study by Johnson (1967, 12). Maslove (1972) too, finds that 'family money income' is distributed across income classes almost identically to his 'full income' concept (as used in Table 3) with the exception of the very highest income class (over $15,000) where the inclusion of the imputed corporate income items (on the assumption that most of the corporate tax falls on the owners of capital) makes 'full income' appear more unequally distributed than 'family money income.' Consequently, any given set of assumptions on tax incidence using the latter distribution, as is done here, will yield a result that is more progressive in the highest income class.

TABLE C.1

The composition of non-farm residential property taxation, Ontario (1969; thousands of dollars)

Owner-occupied		(67%)	$481,454.3
-land	(25%)		120,363.6
-improvements	(75%)		361,090.7
Rented		(33%)	237,134.2
-land	(25%)		59,283.5
-improvements	(75%)		177,850.6
Total residential property taxes			$718,588.5

NOTES AND SOURCES

1 Total residential property taxes have been estimated at 86 per cent of the total for 'residential and farm taxation' shown for 1969 in Ministry of Treasury (1974). This breakdown is similar to that used in Johnson (1967) and Maslove (1972) (although the figures are different than those used in the latter).

2 The split between owner-occupied and rental property was estimated by using the proportion of owner-occupied versus rented non-farm dwellings obtained from the 1970 *Survey of Consumer Finances* plus our own assumption about the differences in average values of owned versus rented properties.

3 The split between land and improvements is that used in Gillespie (1975). The last published data for Ontario is in Ministry of Treasury (1968) and shows a 27–73 per cent split for *all* properties.

The appropriate income concept in tax incidence studies is discussed further in chapter five, but in defence of the 'money income' concept it may be noted here that this is the concept which approaches the popular conception of 'income' most closely. It therefore perhaps has more *a priori* significance in terms of popular *perception* of tax incidence than more refined attempts to measure 'ability to pay' (see also chapter two above). Furthermore, the money income concept clearly has more policy relevance in the minds of policy makers than theoretically 'better' measures of economic well-being, as shown in the current vs. permanent income controversy discussed in chapter five. For these reasons, then, and because it really makes little difference in the final results, it seemed appropriate to employ this relatively simple income variable in this exercise.

Table C.2 shows the income distribution used in this exercise as well as the other distributive series needed in order to carry out the incidence exercise in accordance with the five assumptions stated in chapter four. As noted in that table, the rent payments series comes from *Family Expenditure in Canada*, while the rest of the data are from the *Survey of Consumer Finances*. The series on rent payments is therefore not strictly comparable with the rest of the table. This non-comparability results in part from the fact that *Family Expenditure in*

TABLE C.2

Distributive series used in incidence exercise (Ontario, 1969; per cent)

Series / Money income class	Under 3000	3000-3999	4000-4999	5000-5999	6000-6999	7000-9999	10,000-14,999	15,000-and over	All classes[2]
1. Money Income	3.3	2.3	3.4	4.9	5.5	22.9	32.3	26.1	100.0
2. Rental Income	8.0	5.6	8.5	6.0	5.3	18.3	14.4	33.8	100.0
3. Capital Income	7.0	4.2	5.9	6.0	7.6	14.9	17.3	37.2	100.0
4. Rent Payments[1]	9.6	5.5	4.6	7.8	8.0	27.3	25.2	12.0	100.0
5. Estimated market value of owner-occupied homes	7.7	3.7	4.0	4.4	6.0	24.8	29.6	19.9	100.0
6. Estimated number of families and unattached individuals	16.7	5.7	6.5	7.6	7.4	22.6	23.0	10.7	100.0

SOURCE: All rows except row (4) from Statistics Canada published and unpublished data. *Survey of Consumer Finances, 1970.* See Statistics Canada Catalogue no. 13-547, *Incomes, Assets and Indebtedness of Families in Canada*, 1969. Row 4 is from Statistics Canada Catalogue no. 62-536, *Family Expenditure in Canada*, vol. II, Regions, 1969.

NOTES:

[1] Because of methodological differences, *Family Expenditure in Canada* covers fewer low-income units than *Survey of Consumer Finances.* Thus, the distribution of rent payments above is not completely compatible with the other distributive series in the table.

[2] Totals may not add because of rounding.

Canada is considerably less complete in covering low-income units than the other surveys on which the distribution of families and unattached individuals and of income items are based.

The series of rent payments is used to distribute that portion of the tax on rental properties assumed to rest on tenants in cases 1 and 2 (which means, of course, that cases 1 and 2 are not strictly comparable to the other cases). The series on the value of owner-occupied homes is used to distribute those taxes assumed to fall on homeowners in cases 1 through 4. Those taxes assumed to fall on the owners of rental properties in cases 1 through 4 are distributed in accordance with the rental income series, which is derived from 'other investment income' in the *Survey of Consumer Finances*. This item consists mainly of net rents but may also contain negligible amounts of miscellaneous investment income.

Finally, the capital income series is used to distribute all or part of the tax in the 'new view' cases 4 and 5. This series consists of interest and dividends. This definition of 'capital income' obviously differs in several respects from that used in such US sources as Ladd (1973) and Pechman and Okner (1974); see appendix B. Clearly, this concept needs to be further refined, as do those formulations of the 'new view' anyway, in the light, for example, of the considerations noted in chapter four, n. 12.

APPENDIX D

Residential property tax relief in other jurisdictions

This appendix summarizes briefly the major provisions for residential property tax relief in other jurisdictions in Canada. Table D.1, which is based mainly on legislation examined in 1975 and on information appearing in the bimonthly *Canadian Tax Journal*, arrays the relief measures found in seven other Canadian provinces by type of relief. Alberta and British Columbia, it will be noted, have both homeowner grants and property tax credits for tenants. On the other hand, Prince Edward Island, where the property tax is provincial anyway, and Quebec do not appear to have any general relief provisions, although the latter reimburses farmers for 40 per cent of their school taxes and persons aged 65 or over may receive a credit for school taxes. No attempt has been made here to summarize the similar special relieving provisions for the old and farmers found in most other jurisdictions.

According to Advisory Commission (1975b) related 'circuit-breaker' tax relief programs existed in some 25 US states in 1974. In addition, 27 states had homestead exemption programs for some or all homeowners (including 9 states which also had circuit-breaker programs), and several others had local option relief programs of one sort or another (Abt Associates, 1975). Some key features of these programs are summarized in chapter six of the present study.

It is clear from this appendix that the closest parallel to the Ontario program is found in Manitoba and that even in that case there are a few differences. The Ontario property tax credit is thus unique in North America in some respects, although in others it is closely related to the programs with somewhat similar ends in some other provinces summarized in this appendix.

TABLE D.1

Property tax relief programs in Canada

Homestead exemptions	
Nova Scotia	Municipalities may exempt from tax the first $2000 of assessed value for widows with incomes below low specified amounts. In addition, all property owners are allowed a 25 per cent reduction on property taxes up to a maximum of $200 with the loss of revenue to the municipality being made up by the province. Tenants receive direct grants determined by rental payments, building assessments, occupancy tax, etc., up to a maximum of $200
Exemptions based on income	
Newfoundland	Those taxpayers with annual incomes of less than $1500 are exempted from school tax, and local taxing authorities may exempt others with incomes greater than $1500 but less than an amount to be prescribed
Nova Scotia	Beginning in 1977, the exemption provision noted above is replaced by an authorization for municipalities to grant income-tested property tax exemptions to widows, widowers, persons 65 years old or over, and single-parent family heads
Homeowner grants	
Saskatchewan	Homeowners receive a grant for their principal residence equal to the lesser of $200 or one-half the general municipal property tax. For farms, the grant is the lesser of $330 or the equivalent of 22 mills on the eligible assessment on the farm. On business buildings, leased farms or dwellings, the grant is the lesser of $220 or 22 mills on the eligible assessment of the property
Alberta	Homeowners receive a refund for a residence or farm equal to the allowable municipal tax if less than $100, to $100 if the allowable municipal taxes are greater than $100 but the allowable provincial school levy is less than $100, and to the allowable provincial school levy if that levy is greater than $100. For those over 65, the formula is the same but $200 is the crucial amount
British Columbia	Homeowners are eligible for a grant of $200 if the amount of current-year taxes is $201 or more: if less, the grant equals the amount of taxes less $1.00. Homeowners over 65 are eligible for an additional $50 grant. These grants are paid to the municipality, not the homeowner. In addition, those eligible for homeowner grants may apply to have the Minister of Finance pay an amount up to $80 to reimburse them for 40 per cent of their liability for school tax in excess of the grant

TABLE D.1 *continued*

Property tax relief programs in Canada

Property tax credits	
New Brunswick	Homeowners receive a credit of 100 per cent of the *provincial* property tax for residents assessed at $11,000 or less. Tenants receive a tax grant of $30
Manitoba	Homeowners and tenants receive a credit against provincial income tax of the lesser of $350, minus the lesser of $200 or 1 per cent of taxable income, or the dwelling unit cost (that is, the property taxes paid or 20 per cent of the rent)
Alberta	*Tenants* receive a credit against provincial income tax of 20 per cent of the rent paid minus one-half of 1 per cent taxable income, where the rent paid is less than $500 for the year, or $90 plus 2 per cent of rental payments up to a maximum total credit of $200, less one-half of 1 per cent of taxable income, where the rent paid exceeds $500
British Columbia	*Tenants* with gross income less than $15,000 receive a credit against provincial income tax of the lesser of $100 less 1 per cent of taxable income or 10 per cent of the rent paid. There is a minimum credit of $80 for those 65 or over

APPENDIX E

Econometric studies of local fiscal response to intergovernmental grants

This appendix presents in summary form the results of 37 econometric studies of local fiscal response to intergovernmental grants, including 5 studies on Canadian data. Table E.1 reports on 22 'determinants' studies (including two Canadian ones by Bodkin and Conklin and Michas), while Table E.2 summarizes 15 studies based on formal models, including three Canadian studies by Auld, Hardy, and Maley. The text of the appendix discusses the evolution of work on this subject and some of its problems.

DETERMINANTS STUDIES

The origin of the initial econometric approaches to the effects of grants on expenditures can be traced back to the well-known study by Fabricant (1952), which attempted to explain the observed variation in state and local expenditures in 1942, using as his independent variables the now classic triumvirate of per capita income, population density, and percentage of population living in urban areas. A decade later, Glenn Fisher (1961) repeated the same experiment using cross-section data for 1957, only to discover that the resulting R^2 (the fraction of total variation in the dependent variable explained by the regression equation) was lower than that achieved by Fabricant in 1952. Fisher (1961, 365) concluded that this lower R^2 provided a 'fertile field for further study, using either quantitative or non-quantitative methods.' And so it proved, as a veritable outpouring of studies attempted to explain how the R^2 could have fallen from 1942 to 1957. Prominent among the explanations put forward for this puzzling result was the significant increase in intergovernmental transfers which had taken place during these 15 years.

TABLE E.1

Determinant studies of local fiscal response to intergovernmental grants

Author	Data	Method	Result
Adams (1966)	cross-section data for 1249 county areas (covering 34 states) considered 'less developed' in 1957	runs 'local fiscal effort' against a number of variables including per capita grants	$\partial(\text{'fiscal effort'})/\partial GR < 0$
Bahl and Saunders (1965)	cross-section data for 48 states: change between 1957 and 1960	runs change in per capita expenditures against a number of variables and change in per capita federal grants to states	$\partial E/\partial GR > 1$
Bahl and Saunders (1966)	cross-section data for 1903, 1942, and 1960	looks at explanatory power of three 'classic' variables over time	$\partial E/\partial GR > 1$
Bishop (1964)	cross-section data for 1400 towns and cities in New England for 1961-62	runs current expenditures against variables and state aid, then weighted expenditures by pupil and by size of expenditure	$1 > \partial E/\partial GR > 0$ (unweighted) $\partial E/\partial GR$ varies (weighted)
Bodkin and Conklin (1971)	cross-section data for Ontario 1961 and 1966	runs per capita expenditures on provincial grants, federal grants, dummy for Northern Ontario and other variables	$1 > \partial E/\partial GR > 0$
Bolton (1969)	quarterly time-series data of national aggregates 1948-63	runs total purchases against a number of variables including total federal grants-in-aid	$1 > \partial E/\partial GR > 0$ for most categories of expenditure
Brazer (1959)	cross-section data for 462 cities in 1951	runs per capita expenditures on a number of variables and intergovernmental revenue	$\partial E/\partial GR > 1$ for 'total general operating' expenditures $1 > \partial E/\partial GR > 0$ for all other categories

TABLE E.1 *continued*

Determinant studies of local fiscal response to intergovernmental grants

Author	Data	Method	Result
Gabler and Brest (1967)	cross-section data for 1960	runs state-local expenditures on current and capital account against a number of variables and the determinants of federal aid to states	–
Kee (1965)	cross-section data for 37 SMAs for 1957	runs expenditures per capita on per capita state aid	$1 > \partial E/\partial \mathrm{GR} > 0$
Kurnow (1963)	cross-section data for 48 states for 1957	runs per capita expenditures on three 'classic' variables and federal grants per capita in exponential form	$\partial E/\partial \mathrm{GR} < 0$
Michas (1969)	pooled cross-section data for ten Canadian provinces 1951, 1956, 1961 (30 observations)	runs per capita provincial and municipal expenditures on several variables including per capita federal aid	not significant
O'Brien (1971)	pooled cross-section data for 48 states for 1958–66	uses OLS, 2SLS and GLS; runs expenditures equation and grant equation	$1 > \partial E/\partial \mathrm{GR} > 0$
Ohls and Wales (1972)	cross-section data for 1968	per capita expenditures run on a number of variables and per capita federal grants	$1 > \partial E/\partial \mathrm{GR} > 0$
Osman (1966)	cross-section data for 48 states for 1960	runs per capita government expenditures against per capita aid on that function and aid on other functions	$\partial E/\partial \mathrm{GR} > 1$
Osman (1968)	cross-section data for 1960	runs (E – GR) on a constant, income per capita and grants per capita	$\partial (E - \mathrm{GR})/\partial \mathrm{GR} < 1$

TABLE E.1 *continued*

Determinant studies of local fiscal response to intergovernmental grants

Author	Data	Method	Result
Pidot (1969)	cross-section data for 80 of the largest SMSAs for 1962	uses principal components analysis to get uncorrelated variables; per capita expenditures on uncorrelated variables and on state aid per capita	$\partial E/\partial \mathrm{GR} > 1$
Pogue and Sgontz (1968)	pooled cross-section data for 48 states 1958-64	runs state-local spending from own funds, then runs federal aid on same independent variables	$\partial E/\partial \mathrm{GR} > 1$
Renshaw (1960)	cross-section data for 48 states for 1949-50 and then 1953-4	runs current expenditures per pupil against a number of variables and revenue from state	$1 > \partial E/\partial \mathrm{GR} > 0$
Sacks and Harris (1964)	cross-section data for 1960	stepwise regression with expenditures per capita depending on 3 'classic' variables and per capita federal and state aid	$\partial E/\partial \mathrm{GR} > 0$ sometimes > 1 sometimes < 1
Sharkansky (1967)	cross-section data for 48 states for 1963	runs expenditures of state government against a number of variables including federal grants as percentage of state government revenue	$\partial E/\partial \mathrm{GR} = 0$
Weicher (1970)	cross-section data for 206 central cities in SMSAs for 1960	runs per capita expenditures on a number of variables (many demographic) and a measure of intergovernmental revenue	$1 > \partial E/\partial \mathrm{GR} > 0$
Weicher (1972)	cross-section data for 121 cities in 1962	runs expenditures against variables and aid divided into categories according to source and recipient	$\partial E/\partial \mathrm{GR} < 0$

TABLE E.2

Models of local fiscal response to intergovernmental grants

Author	Data	Model	Result
Auld (1976)	pooled cross-section data for 15 cities in Ontario for 1969 and 1970; also uses time-series data for 1953-70	maximizes utility of community subject to budget constraint	$\partial E/\partial \mathrm{GR} \lessgtr 1$ depending on expenditure function
Feldstein (1975)	cross-section data for 105 towns in Massachusetts for 1970	study really looking at financing of local public education in way that neutralizes effects of local wealth differences without sacrificing local choice	$1 > \partial E/\partial \mathrm{GR} > 0$
Gramlich (1968, 1969a)	time-series for 1954-5	maximizes utility of citizens of state and local governments subject to constraint that expenditures equal revenues plus borrowing	$1 > \partial E/\partial \mathrm{GR} > 0$
Gramlich and Galper (1973)	quarterly time-series data for state and local governments from 1954 to 1972	maximizes utility of state and local governments subject to budget constraints	$1 > \partial E/\partial \mathrm{GR} > 0$
Hardy (1976)	time-series data for Ontario and New Brunswick, 1948-70	modified version of Gramlich (1968, 1969)	$\partial E/\partial \mathrm{GR} > 1$ for most expenditure categories
Henderson (1968)	cross-section data for US counties for 1967	maximizes community welfare subject to a budget constraint	$\partial E/\partial \mathrm{GR} > 1$
Horowitz (1968)	cross-section data for 1962	postulates simultaneous equations expenditure and employment models	$\partial E/\partial \mathrm{GR} > 1$
Inman (1971)	cross-section data for 41 major US cities 1966-7	maximizes 'leadership preference function' subject to a budget constraint, separating price and income effects of grants	$1 > \partial E/\partial \mathrm{GR} > 0$

TABLE E.2 *continued*

Models of local fiscal response to intergovernmental grants

Author	Data	Model	Result
Ladd (1975)	cross-section data for 78 communities, Boston area, 1970	median voter model	$1 > \partial E/\partial \mathrm{GR} > 0$
Maley (1971)	pooled cross-section and time-series data for 10 provinces, 1947-65	model similar to Gramlich (1968, 1969)	$1 > \partial E/\partial \mathrm{GR} > 0$ for unconditional grants $\partial E/\partial \mathrm{GR} > 1$ for conditional grants
McGuire (1976)	pooled cross-section data for 40 states, 1964-71	maximizes utility of local community subject to budget constraint separating price and income effects of grants	$1 > \partial(E - \mathrm{GR})/\partial \mathrm{GR} > 0$
Smith (1968)	cross-section data for 50 states for 1965	model similar to Davis and Haines (1966) where voters maximize utility and politicians maximize votes	$\partial E/\partial \mathrm{GR} > 0$ except for education and health, where $\partial E/\partial \mathrm{GR} < 0$
Stern (1973)	cross-section data for 157 observations in Massachusetts 1968-9	maximizes preference function for local school boards and estimates local expenditure equation using non-linear estimation	$1 > \partial E/\partial \mathrm{GR} > 0$
Strauss (1974)	cross-section data for Wisconsin for 1967	sets up model of local expenditures and tax rates and solves for reduced form given that expenditures equal revenues	$\partial E/\partial \mathrm{GR} > 1$
Struyk (1970)	cross-section data for 140 school districts in New Jersey 1965-6	modified version of Gramlich (1968) except that grants are treated endogenously	$1 > \partial E/\partial \mathrm{GR} > 0$ for education $\partial E/\partial \mathrm{GR} > 1$ for welfare

Among the earliest expenditure determinant studies to include grants explicitly as an independent variable was that by Sacks and Harris (1964), who argued that a significant amount of the variation in state and local expenditures could be explained by increased federal and state aid. Using cross-section data for 1960, they computed regressions in a stepwise fashion, that is, by including one explanatory variable at a time to see how its addition to the equation affected the R^2. Their conclusion was that adding a variable representing federal and state aid to the three 'classic' variables increased the R^2. The aid variable was also found to be a significant determinant of the expenditure level of state and local governments, having a stimulative effect for most expenditure categories.

A number of similar cross-section studies were attempted around the same time by such authors as Brazer (1959), Renshaw (1960), Kurnow (1963), Bishop (1964), and Bahl and Saunders (1965). With the exception of Kurnow, who hypothesized a non-linear relationship between expenditures and four explanatory variables, all of these authors tested a linear relationship between state and/or local expenditures and several independent variables. As Table E.1 shows, their results varied widely. The econometric techniques used in all these studies were fairly straightforward, perhaps because it was not until somewhat later that some of the serious statistical problems with these procedures became evident.

Pidot (1969), for example, recognized that there was a problem of multicollinearity in these earlier studies where two or more of the explanatory variables are linearly dependent, with the result that it is difficult to isolate the influences of each variable. For example, a number of studies used the three 'classic' variables mentioned above, but none seemed to realize that the likelihood that 'per cent of population living in urban areas' and 'population density' would be correlated was fairly high. One would expect to find, for example, that a state with a high percentage of urban residents will also have a high population density. The econometric consequence of this relationship is that one of these variables captures the effect of both of them while the other variable appears to be insignificant. To circumvent this problem, Pidot used principal components analysis, a rather sophisticated technique whereby six new uncorrelated variables were created from linear combinations of the original 30 variables.

Another problem in many of these studies is simultaneous equations bias. Many authors have argued that not only do grants have an impact on expenditure levels but also expenditure levels have an impact on the amount of aid received. In other words, grants should not be treated as if they were exogenous (determined outside the model). Fisher (1964), for instance, justified the omission of a grant variable in his expenditure determinant study by citing this problem. Nothing was done to solve it, however, until somewhat later. The statistical consequence of running a single equation explaining expenditures as a function of grants when in fact grants are also, in part, a function of expenditures, is that the coefficient estimates will be biased. Pogue and Sgontz (1968) were among the first to see this problem. They ran expenditures from own funds against a number of independent variables and then ran grants against the same variables. Their results were significant, leading them to conclude that grants were determined, in part, by the same variables that determined expenditures. Consequently, grants could not properly be treated as exogenous. O'Brien (1971), however, did not agree with this conclusion. He ran a somewhat different test using two stage least squares as well as ordinary and generalized least squares, to take account of interaction effects. His conclusion was that grants and expenditures are not simultaneously determined so that grants *can* be treated as exogenous. As with the appropriate independent variable (see chapter eight), there is still no consensus in the literature on this point.

Some of the potential problems with cross-section data were mentioned in passing in chapter eight. Another problem is that the results obtained are, in principle, only valid for the particular year observed. In order to alleviate the influence on the results of the point in time chosen, pooling of cross-section and time-series data has been attempted by Michas (1969) with Canadian data, Pogue and Sgontz (1968), and O'Brien (1971). Time-series models have their own problems, of course, and applying any time-series model (e.g., Gramlich, 1968) to cross-section data usually requires significant modifications to take account of the fact that while such variables as interest rates and prices may vary over time, it is not likely that they will vary much across municipalities in a single province.

FORMAL MODELS

As noted in chapter eight, some of the main problems with determinants studies can be resolved by specifying and testing a formal model of local fiscal behaviour. One of the first studies to formulate an explicit model incorporating grants was that by Horowitz (1968), whose major concern was with correcting for the simultaneous equations bias inherent in most previous studies. She used two models - an expenditure model and an employment model, each consisting of four equations. The expenditure model explained per capita expenditures, taxes, the distribution of income and the percentage of the population living in urban areas. These models were estimated by two-stage least squares and it was found that the response of expenditures to grants was greater than one.

A number of other US studies subsequently set up models of government behaviour derived from conventional models of consumer behaviour, in which utility is maximized subject to a constraint. In these models, governments are essentially assumed to select that amount of public expenditures and private expenditures that will maximize the utility of the community subject to a budget constraint. Henderson (1968), for example, argued that the utility of the residents of any community depended on community per capita personal income, community per capita revenue from federal and state governments, and population. When utility thus defined was maximized subject to a budget constraint, he ended up estimating an equation which explained per capita public expenditure as a linear function of per capita personal income, per capita grants, and population. Estimation of this equation using cross-section data, for metropolitan and non-metropolitan counties separately, provided the result that $\partial E/\partial \mathrm{GR}$ was greater than one for both types of counties.

Gramlich (1968) also maximized the utility of citizens, assuming that utility depends on public expenditures, current saving of government, and private after-tax incomes, subject to the constraint that expenditures equal revenues plus borrowing. A quadratic utility function was employed to ensure diminishing marginal utility and linear estimating equations. Before obtaining empirical estimates, Gramlich made a few adjustments to his model and solved for the reduced form equations where expenditures and taxes depend on grants and income. He also added an interest rate variable to the expenditure equation and other variables to the other equations. Estimation carried out using simultaneous equations techniques with time-series data yielded the result that $\partial E/\partial \mathrm{GR}$ was between zero and one, that is, grants increased expenditures by an amount less than the grant.

Struyk (1970) considered the effect of state grants on local expenditures on education and welfare in New Jersey. He basically used a modified version of the Gramlich and Henderson models, adding an equation to explain aid on the grounds that grants depend on local expenditure and thus cannot be treated as being exogenous. He used cross-section data (and thus had to exclude interest rates which may vary over time but not across localities in a given state) and found that grants were not significant in explaining education expenditures but were significant in explaining welfare (for which, $\partial E/\partial \mathrm{GR}$ exceeded one).

Smith (1968), using a model based on Davis and Haines (1966), in which voters maximize utility and politicians maximize votes, derived an equation explaining per capita state and local government expenditures from own sources as a linear function of aid, income, population density, per cent urban population, per cent over 65 years of age, and public school enrolment per 1000 of state population. His results showed $\partial E/\partial \mathrm{GR}$ to be between zero and one for all functions except education and health, where $\partial E/\partial \mathrm{GR}$ was less than zero.

A somewhat different model was set out by Stern (1973) in which he maximized the preference function of local school boards where preferences depend on the school board's perception of total current revenues available per pupil (including grants), the current school tax rate and a number of demographic variables. Revenues depended on expenditures, and the tax rate was determined by equalized assessed value and expenditures. Stern ended up with a non-linear equation to explain expenditures and estimation of this equation resulted in $\partial E/\partial \mathrm{GR}$ between zero and one.

Finally, McGuire (1975), in an interesting theoretical paper, dispensed with the obviously unrealistic hypothesis that politicians consciously maximize the welfare of their constituents. Instead, he postulated that bureaucrats respond to price and budget changes in a consistent manner. He contended that budget- or bureau-maximizing behaviour could also be tested with this model. McGuire theoretically divided the grant into its price and income components such that this proportion could be estimated empirically. In his model, expenditures on the aided function depend linearly on expenditures on the unaided functions, that portion of grants not remitting in tax reductions, the ratio of grants to expenditures plus grants, and all the usual socio-economic variables.

As this brief discussion suggests, considerable progress has been made toward resolving the many difficult conceptual and empirical problems encountered in modelling local fiscal behaviour. While there is obviously still a long way to go in many respects, estimates such as that in appendix F at least avoid many of the problems encountered by many earlier studies. Further refinement is certainly possible and desirable, but for the moment at least the model applied in appendix F seems about as good an approach to this difficult question as the present state of the art affords.

APPENDIX F

Estimated impact of unconditional grants

From the system of equations presented in chapter eight it may be noted that, given the budget constraint and the fact that OR and AV are exogenous, it is not necessary to estimate the whole system of equations. For example, by estimating the parameters of the equations for GRU and E, and given the budget constraint, the parameters for the equation for t_R can be directly determined. For estimation purposes the equation for t_R is therefore redundant.

Estimation was done on the system of equations in both the Stone-Geary and translog forms by a three-stage least squares method using TSP's non-linear regression package. This package employs the Gauss-Newton method to minimize the sum of squared residuals, repeating the procedure until convergence is achieved. Pooled cross-section data for fifty upper-tier municipalities in Ontario in 1973 and forty-nine upper-tier municipalities in 1974 were used.

The results derived from the Stone-Geary model and the translog model are shown on the top of the following page (t-statistics shown in parenthesis). A summary of the results from these models appears in Table F.1. The interpretation of these results in chapter eight is sometimes different than the coefficients in this table because of scaling (see note 19 to chapter eight).

In order to carry out these estimates it was necessary to aggregate the data for the upper-tier municipalities. The data used were the following: E = total municipal expenditures on all functions; E_{-1} = total municipal expenditures on all functions in the previous year; (t_RAV) = total taxes; $(t_R\text{AV})_{-1}$ = total taxes in the previous year; M = matching rate for conditional grants determined by GRC/E; PR = price of the aided good determined by $(1 - M)$; GRC = conditional grants; GRU = unconditional grants; Y = total money income; OR = all revenue

Results from the Stone-Geary model

$$\textsc{gru} = \underset{(1.62)}{1107.67} - \underset{(-2.93)}{1585.92}(E/E_{-1}) - \underset{(-4.75)}{0.14}\,(t_R\textsc{av})_{-1} + \underset{(10.02)}{0.05}\,\textsc{pop} + \underset{(6.64)}{3196.54}\,\textsc{dum},$$

$$R^2 = 0.9591,$$

$$E = (1/\textsc{pr})\,[-\underset{(4.25)}{0.011}\,(\underset{(0.39)}{1168630} + \underset{(1.42)}{29.10}\,\textsc{pop} - \underset{(-0.59)}{24774.2}\,\textsc{rtb} - \underset{(-1.00)}{1154960}\,\textsc{dum}$$

$$- \underset{(-2.14)}{495.72}\,\textsc{ts}) + \underset{(4.25)}{0.011}\,(Y + \textsc{gru} + \textsc{or})] + (1 - \underset{(4.25)}{0.011})\,(\underset{(0.56)}{23742.8}$$

$$+ \underset{(2.04)}{0.48}\,\textsc{pop} - \underset{(-0.81)}{486.79}\,\textsc{rtb} - \underset{(-0.93)}{14075.1}\,\textsc{dum} - \underset{(-2.72)}{5.53}\,\textsc{ts}),$$

$$R^2 = 0.9977.$$

Results from the modified translog model

$$\textsc{gru} = \underset{(1.77)}{1305.82} - \underset{(-2.93)}{1723.44}(E/E_{-1}) - \underset{(-4.32)}{0.139}(t_R\textsc{av})_{-1} + \underset{(9.29)}{0.05}\,\textsc{pop} + \underset{(6.92)}{3195.54}\,\textsc{dum},$$

$$R^2 = 0.9592,$$

$$E/S = [(\underset{(-33.44)}{-42469.3} - \underset{(-0.74)}{0.005}\,\textsc{pop} + \underset{(0.33)}{2.11}\,\textsc{rtb} + \underset{(0.58)}{171.911}\,\textsc{dum} + \underset{(0.68)}{0.029}\,\textsc{ts})$$

$$\underset{(-22.99)}{-1524.53}\ln(\textsc{pr}/S) + \underset{(24.24)}{148117}\ln(1/S)]\ /\ \textsc{pr}\ [-1 \underset{(-26.86)}{-3.55}\ln(\textsc{pr}/S)$$

$$+ \underset{(29.32)}{3.46}\ln(1/S)],$$

$$R^2 = 0.3078.$$

other than Ontario grants and property taxes, that is, 'other revenue' (mostly fees and charges), payments-in-lieu of taxes, and transfers from federal and other municipal governments; POP = population; $S = Y + \textsc{gru} + \textsc{or}$; RTB = residential taxes as a percentage of total taxes; DUM = location in Northern Ontario; and TS = school taxes.

TABLE F.1

Results from the models, 1973, 1974

Variable	Stone-Geary		Translog	
POP	0.077	(4.14)	0.0345	(0.78)
RTB	−143.645	(−2.08)	−13.357	(−0.33)
DUM	1830.57	(1.22)	−1090.54	(−0.57)
TS	1.288	(7.19)	−0.183	(−0.71)
Y	0.014	(4.25)	0.051	(10.11)
OR	0.014	(4.25)	0.051	(10.11)
GRU	0.014	(4.25)	0.051	(10.11)
PR	−88286.3	(−6.35)	−16620	(−0.36)
GRC	2.28		0.428	
Elasticities				
PR	−1.78		−0.334	
Y	0.258		0.934	

SOURCE: Slack (1977, 150).
NOTE: Coefficients show response of total municipal expenditures to variable indicated calculated at the mean; *t*-statistics appear in parentheses.

All data were taken from Ministry of Treasury (1974, 1975), except for *Y*, which was derived from National Revenue (1975, 1976). This income variable is particularly suspect because the county boundaries in this source do not always correspond with those in the Ministry of Treasury publications. (See also note 7 to chapter one and Ministry of Treasury (1975) on problems with the equalized assessment figures.)

Bibliography

Aaron, Henry (1975) *Who Pays the Property Tax?* (Washington, DC: The Brookings Institution)

Abt Associates, Inc. (1975) *Property Tax Relief Programs for the Elderly.* Prepared for US Department of Housing and Urban Development (Washington)

Adams, R.F. (1966) 'The fiscal response to governmental transfers in less developed areas of the United States.' *Review of Economics and Statistics* 48, 308-13

Advisory Commission on Intergovernmental Relations (1975a) *Changing Public Attitudes on Governments and Taxes* (Washington)

- (1975b) *Property Tax Circuit-Breakers: Current Status and Policy Issues* (Washington)

Asimakopulos, A (1965) 'Analysis of consumer expenditure surveys.' *Canadian Journal of Economics and Political Science* 31, 222-41

- and J.B. Burbidge (1976) 'Harberger and Kalecki on the incidence of taxation: a critical comparison.' McMaster University, Department of Economics, Working paper no. 76-11

Assessment Education Branch (1971) *The Economics of Real Property Assessment* (Toronto: Department of Municipal Affairs)

Assessment Standards Branch (1974) *Real Property Taxation: History, Theory and Administration* (Toronto: Ministry of Revenue)

Atkinson, A.B. (1971) 'Capital taxes, the redistribution of wealth, and individual savings.' *Review of Economic Studies* 38, 221-2

Auld, D.A.L. (1976) 'Provincial grants and local government expenditure.' *Public Finance Quarterly* 4, 295-305

- (1977) 'Fiscal knowledge and preferences in Ontario.' Working Paper 2 (Toronto: Ontario Economic Council)
- and F.C. Miller (1975) *Principles of Public Finance: A Canadian Text* (Toronto: Methuen)

Bahl, Roy W. and Robert J. Saunders (1965) 'Determinants of changes in state and local government expenditures.' *National Tax Journal* 19, 50-7
- (1966) 'Factors associated with variations in state and local government spending.' *Journal of Finance* 21, 523-34

Bentzel R. (1970) 'The social significance of income distribution statistics.' *Review of Income and Wealth* 16, 253-64

Bird, R.M. (1967) 'Equity and taxes in the Carter Report.' In Canadian Tax Foundation, *1967 Tax Conference*, 256-64 (Toronto)
- (1970a) 'The tax kaleidoscope: perspectives on tax reform in Canada.' *Canadian Tax Journal* 18, 444-73
- (1970b) *The Growth of Government Spending in Canada* (Toronto: Canadian Tax Foundation)
- (1972) 'The case for taxing personal wealth.' In Canadian Tax Foundation, *1971 Tax Conference*, 3-24 (Toronto)
- (1974) *Taxing Agricultural Land in Developing Countries* (Cambridge, Mass.: Harvard University Press)
- (1976a) 'Who pays the property tax?' In Canadian Tax Foundation, *1975 Conference Report*, 736-48 (Toronto)
- (1976b) 'The incidence of the property tax: old wine in new bottles.' *Canadian Public Policy* 2, supplement, 323-34
- (1976c) 'Assessing tax performance in developing countries.' *Finanzarchiv* 34, 244-65
- (1976d) *Charging for Public Services* (Toronto: Canadian Tax Foundation)
- (1976e) 'Financing urban development: a worldwide challenge.' Paper prepared for Conference of Mayors of the World's Largest Cities (Milan)
- (1976f) 'Tax reform and tax design in developing countries.' Paper presented at National Tax Association - Tax Institute of America (Atlantic City)
- and M.W. Bucovetsky (1976) *Canadian Tax Reform and Private Philanthropy* (Toronto: Canadian Tax Foundation)
- and L.H. DeWulf (1973) 'Taxation and income distribution in Latin America: a critical review of empirical studies.' *International Monetary Fund Staff*
- *Papers* 20, 639-82
- and N.E. Slack (1976) 'The incidence of the property tax in Canada: a review of the literature.' In Tri-Level Task Force on Public Finance (1976)

Bishop, G.A. (1964) 'Stimulative vs. substitutive effects of state school aid in New England.' *National Tax Journal* 17, 133-43

Black, D.E. (1974) 'The incidence of differential property taxes on urban housing: some further evidence.' *National Tax Journal* 27, 367-9

Bodkin, R.G. and D.N. Conklin (1971) 'Scale and other determinants of municipal government expenditures in Ontario: a quantitative analysis.' *International Economic Review* 12, 465-81

Bolton, R.E. (1969) 'Predictive models for state and local government purchases.' Pp. 221-67 in J.S. Duesenberry *et al.* (eds), *The Brookings Model: Some Further Results* (Chicago: Rand McNally and Co.)

Brazer, H.E. (1959) *City Expenditures in the United States* ((New York: National Bureau of Economic Research, Inc.)

Break. G.F. (1974) 'The incidence and economic effects of taxation.' In A. Blinder *et al.*, *The Economics of Public Finance* (Washington, DC: The Brookings Institution)

- (1976) 'Property taxation: a reappraisal of burden, incidence, equity and their policy implications.' In A.D. Lynn (ed.), *Property Taxation, Land Use, and Public Policy* (Madison: University of Wisconsin)

Breton, Albert (1974) *The Economic Theory of Representative Government* (Chicago: Aldine)

Brown, H.G. (1924) *The Economics of Taxation* (New York: Henry Holt and Co.)

Buchanan, James (1969) *Cost and Choice* (Chicago)

Bureau of Municipal Research (1970) *Market Value Reassessment* (Toronto)

- (1973) *Property Taxation and Land Development* (Toronto)

Carliner, G. (1973) 'Income elasticity of housing demand.' *Review of Economics and Statistics* 55, 528-32

Chernos, Bernard (1969) 'The assessor and actual value.' *Proceedings of Thirteenth Annual Meeting, Institute of Municipal Assessors of Ontario* 79-85 (Ottawa)

Church, A.M. (1974) 'Capitalization of the effective property tax rate on single-family residences.' *National Tax Journal* 27, 113-22

Clayton, F.A. (1966) 'Distribution of urban residential property tax burdens and expenditure benefits in Canada.' Unpublished PhD dissertation (Queen's University)

- (1968) 'An assessment of proposals affecting property tax burdens.' In Canadian Tax Foundation, *Special Conference Report* 47-64 (Toronto)

- (1976) 'Real property tax assessment practices in Canada: an overview.' *Canadian Public Policy* 2, supplement, 347-62

Coen, R.M. and B.J. Powell (1972) 'Theory and measurement of the incidence of differential property taxes on rental housing.' *National Tax Journal* 25, 211-16

Commission on the Reform of Property Taxation in Ontario (1977) *Report* (Toronto)

Committee on Farm Assessment and Taxation (1969) *Report* (Toronto)

Cook, Gail C.A. (1974) 'Public service organization in metropolitan areas.' Draft (Toronto)

Cowing, T.G. (1974) 'Real property taxes, local public services and residential property values: Comment.' *Southern Economic Journal* 40, 325-9

Crowley, Ronald W. (1971) 'Provincial-municipal grants: estimates of inter-county income redistribution through Ontario grant programmes in 1961.' *Canadian Journal of Economics* 4, 61-77

- (1975) 'Intergovernmental and fiscal aspects.' *Canadian Public Policy* 1, 376-92

Daicoff, D.W. (1967) 'Capitalization of the property tax.' Pp. 46-73 in H.E. Brazer (ed.), *Essays in State and Local Finance* (Ann Arbor, Michigan: University of Michigan)

Davis, O.A. and G.H. Haines Jr. (1966) 'A political approach to a theory of public expenditure: the case of municipalities.' *National Tax Journal* 19, 259-75

de Leeuw, Frank (1971) 'The demand for housing: a review of cross-section evidence.' *Review of Economics and Statistics* 53, 1-10

Department of Housing and Urban Development (1974) *A Study of the Financial Practices of Governments in Metropolitan Areas* (Washington)

DeWulf, L.H. (1975) 'Fiscal incidence studies in developing countries: survey and critique.' *International Monetary Fund Staff Papers* 22, 61-131

Dodge, D.A. (1975) 'Impact of tax, transfer, and expenditure policies of government on the distribution of personal income in Canada.' *Review of Income and Wealth* 21, 1-52

Dominion Bureau of Statistics (1968) *Principal Taxes and Rates* (Ottawa)

- (1969) *Principal Taxes and Rates* (Ottawa)

- (1970) *Principal Taxes and Rates: Federal, Provincial and Selected Municipal Governments* (Ottawa)

Dupré, J.S. (1967) *Intergovernmental Finance in Ontario: A Provincial-Local Perspective* (Toronto: Queen's Printer)

- (1974) 'Structural problems as a bottleneck to reform.' Pp. 620-5 in Canadian Tax Foundation, *1973 Conference Report* (Toronto)

Easton, David (1965) *A Systems Analysis of Political Life* (New York: Wiley)

Edel, Mathew and Elliott Sclar (1974) 'Taxes, spending and property values, supply adjustment in a Tiebout-Oates model.' *Journal of Political Economy* 82, 941-54

Engle, R.F. (1975) 'De facto discrimination in residential assessments: Boston.' *National Tax Journal* 28, 445-51

Fabricant, Solomon (1952) *The Trend of Government Activity in the United States Since 1900* (New York: National Bureau of Economic Research, Inc.)

Feldman, Lionel D. (1976) 'The changing role of the real property tax in Canada.' Pp. 713-22 in Canadian Tax Foundation, *1975 Conference Report* (Toronto)

Feldstein, M. (1974) 'Incidence of a capital income tax in a growing economy with variable savings rates.' *Review of Economic Studies* 4, 503-13

- (1975) 'Wealth neutrality and local choice in public education.' *American Economic Review* 65, 75-89

- (1976) 'Compensation in tax reform.' *National Tax Journal* 29, 122-30

Finnis, F.H. (1970) *Property Assessment in Canada* (Toronto: Canadian Tax Foundation)

- (1972) *An Introduction to Real Property Taxation* (Toronto: Sir Isaac Pitman (Canada) Ltd.)

Fisher, G.W. (1961) 'Determinants of state and local government expenditures: a preliminary analysis.' *National Tax Journal* 14, 349-55

- (1964) 'Interstate variation in state and local government expenditure.' *National Tax Journal* 17, 57-74

- (1969) *Taxes and Politics: A Study of Illinois Public Finance* (Urbana: University of Illinois Press)

- (1976) 'Property taxation and the political system.' In A.D. Lynn (ed.), *Property, Taxation, Land Use, and Public Policy* (Madison: University of Wisconsin)

- and R.P. Fairbanks (1967) 'The politics of property taxation.' *Administrative Science Quarterly* 12, 48-71

Friedman, Milton (1957) *A Theory of the Consumption Function* (Princeton: Princeton University Press)

Gabler, L.R. and J.I. Brest (1967) 'Interstate variations in per capita highway expenditures.' *National Tax Journal* 20, 78-85

Gaffney, Mason (1972) 'The property tax is a progressive tax.' Pp. 408-26 in National Tax Association, *1971 Conference Proceedings*

- (1973) 'An agenda for strengthening the property tax.' Pp. 65-84 in G.E. Peterson (ed.), *Property Tax Reform* (Washington: Urban Institute)

Gillespie, W.I. (1964) *The Incidence of Taxes and Public Expenditures in the Canadian Economy.* Studies of the Royal Commission on Taxation, no. 2 (Ottawa)

- (1974) 'An examination and analysis of municipal financial problems.' Pp. 561-90 in Canadian Tax Foundation, *1973 Conference Report* (Toronto)

- (1975) 'The redistribution of income in Canada in 1969. An analysis of the incidence of taxes and public expenditures in the Canadian economy.' (Ottawa)

- (1976) 'On the redistribution of income in Canada.' *Canadian Tax Journal* 24, 419-50

Goffman, I.J. (1962) *The Burden of Canadian Taxation - Allocation of Federal, Provincial and Local Taxes Among Income Classes* (Toronto: Canadian Tax Foundation)

Gold, Steven D. (1976) 'A note on the design of property tax circuit breakers *National Tax Journal* 29, 477-81

Gramlich, E.M. (1968) 'Alternative federal policies for stimulating state and local expenditures: a comparison of their effects.' *National Tax Journal* 21, 119-29

- (1969a) 'State and local governments and their budget constraint.' *International Economic Review* 10, 163-82

- (1969b) 'The effect of federal grants on state-local expenditures: A review of the econometric literature.' *Proceedings of the Sixty-Second Annual Conference on Taxation, National Tax Association* (Columbus)

- and H. Galper (1973) 'State and local fiscal behavior and federal grant policy.' *Brookings Papers on Economic Activity*

Green, Christopher (1973) 'Implementing income supplements: the case for a tax credit approach.' *Canadian Tax Journal* 21, 426-40

Grieson, R.E. (1974) 'The economics of property taxes and land values: the elasticity of supply of structures.' *Journal of Urban Economics* 1, 367-81

Gustely, R. (1974) 'Local taxes, expenditures and urban housing: a reassessment of the evidence.' Virginia Polytechnic Institute

Hamilton, Bruce W. (1973) 'Some equity and efficiency effects of fiscal zoning.' Urban Institute Working Paper 1207-27 (Washington, DC)

Harberger, Arnold (1962) 'The incidence of the corporation income tax.' *Journal of Political Economy* 70, 215-40

Hardy, H.M. (1976) 'Budgetary responses of individual governmental units to federal grants.' *Public Finance Quarterly* 4, 173-86

Hartle, Douglas G. (1968) 'The impact of new tax policies on national unity.' Policy Paper no. 1, Institute for Policy Analysis, University of Toronto

Hayami, Y. and V.W. Ruttan (1971) *Agricultural Development* (Baltimore: Johns Hopkins Press)

Head, J.G. (1968) 'Welfare methodology and the multi-branch budget.' *Public Finance* 23, 405-24

Health and Welfare, Canada (1977) *The Distribution of Income in Canada: Concepts, Measures, and Issues.* Social Security Research Report no. 04, March

Heilbrun, J. (1966) *Real Estate Taxes and Urban Housing* (New York: Columbia University Press)

Heinberg, J.D. and W.E. Oates (1970) 'The incidence of differential property taxes on urban housing: A comment and some further evidence.' *National Tax Journal* 23, 92-8

- (1972) 'The incidence of differential property taxes on rental housing: an addendum.' *National Tax Journal* 25, 221-2

Henderson, J.M. (1968) 'Local government expenditures: a social welfare analysis.' *Review of Economics and Statistics* 50, 156-63

Hirschman, Albert (1970) *Exit, Voice, and Loyalty* (Cambridge, Mass.: Harvard University Press)

Horowitz, A.R. (1968) 'A simultaneous equation approach to the problem of explaining interstate differences in state and local government expenditures.' *Southern Economic Journal* 34, 459-76

Houthakker, H.S. (1965) 'New evidence on demand elasticities.' *Econometrica* 33, 277-88

Hyman, D.N. and E.C. Pasour Jr. (1973a) 'Real property taxes, local public services, and residential property values.' *Southern Economic Journal* 39, 601-11

- (1973b) 'Real property tax differentials and residential rents in North Carolina.' *National Tax Journal* 26, 303-7

- (1974) 'Real property taxes, local public services, and residential property values: reply.' *Southern Economic Journal* 40, 329-31

Ilchman, Warren F. and N.T. Uphoff (1969) *The Political Economy of Change* (Berkeley: University of California Press)

Inman, R.P. (1971) 'Towards an econometric model of local budgeting.' *Proceedings of the Sixty-Fourth Annual Conference on Taxation, National Tax Association* (Columbus)

Intergovernmental Committee on Urban and Regional Research (1974) *A Canadian Approach to Minimizing Real Property Tax Exemptions.* Prepared for the Conference of Ministers of Municipal Affairs by an Intergovernmental Working Group on Real Property Tax Exemptions

International Association of Assessing Officers (1969) *Farm Land Assessment Practices in the United States* (Chicago)

James, L.J. (1973) 'The stimulation and substitution effects of grants-in-aid: a general equilibrium analysis.' *National Tax Journal* 26, 251-65

Jantscher, G. (1968) 'Proposal to tax gifts and bequests as income to the recipient.' Pp. 417-23 in Canadian Tax Foundation, *1967 Tax Conference* (Toronto)

Jenkins, G.P. (1973) 'The measurement of rates of return and taxation from private capital in Canada.' Harvard Institute of Economic Research Discussion Paper no. 202

Jensen, J.P. (1931) *Property Taxation in the United States* (Chicago: University of Chicago Press)

Johnson, J.A. (1967) *The Incidence of Government Revenues and Expenditures* (Toronto: Queen's Printer)

- (1974) 'New tax sources and tax-sharing for Canadian municipalities.' Pp. 591-612 in Canadian Tax Foundation, *1973 Conference Report* (Toronto)

Kaldor, N. (1955) *An Expenditure Tax* (London: George Allen and Unwin Ltd)

Kaplan, Harold (1967) *Urban Political Systems: A Functional Analysis of Metro Toronto.* (New York: Columbia University Press)

Kartman, A.G. (1972) 'New evidence on the demand for housing.' *Southern Economic Journal* 38, 525-30

Kee, W.S. (1965) 'Central city expenditures and metropolitan areas.' *National Tax Journal* 18, 337-53

King, A. Thomas (1973) *Property Taxes, Amenities and Residential Land Values* (Cambridge, Mass.: Ballinger Publishing Co.)

Kurnow, E. (1963) 'Determinants of state and local expenditure re-examined.' *National Tax Journal* 16, 252-5

Ladd, H.F. (1973) 'The role of the property tax: a reassessment.' In R.A. Musgrave (ed.), *Broad-Based Taxes: New Options and Sources* (Baltimore: Johns Hopkins Press)

– (1975) 'Local education expenditures, fiscal capacity, and the composition of the property tax base.' *National Tax Journal* 28, 145-58

Lee, T.H. (1963) 'Demand for housing: a cross-section analysis.' *Review of Economics and Statistics* 45, 190-6

– (1968) 'Housing and permanent income: tests based on a three year interview survey.' *Review of Economics and Statistics* 50, 480-90

Legislature of Ontario (1957) *Debates* (6 March; 5 April)

MacKay, A.N. (1968) *Appraisal Notes for the Assessor* (Toronto: Department of Municipal Affairs)

Makuch, S. (1973) 'Metropolitan government in a provincial context: a study of Metropolitan Toronto.' *Ottawa Law Review* 6, 41-77

Maley, J. (1971) 'The impact of federal grants on provincial budgets: Canada.' PhD dissertation, University of Rochester

Manitoba (1964) *Report of the Manitoba Royal Commission on Government Organization and Finance* (Winnipeg)

– (1975) *1975 Manitoba Budget Address*

Martin, Joe (1972) 'Real property taxation: stirrings of reform.' *Canadian Tax Journal* 20, 437-52

Maslove, A.M. (1972) *The Pattern of Taxation in Canada.* A study prepared for the Economic Council of Canada (Ottawa)

Maxwell, J.A. and G.E. Carter (1974) 'Equalizing local government revenues.' *Canadian Tax Journal* 22, 397-405

Mayer, Thomas (1974) 'The distribution of tax burden and permanent income.' *National Tax Journal* 27, 141-6

McFadyen, Stuart (1970) 'British Columbia's home-owner grant program.' *Canadian Tax Journal* 18, 420-34, 533-39

McGuire, M. (1975) 'An econometric model of federal grants and local fiscal response.' Pp. 115-38 in Oates (1975)

- (1976) 'A method for estimating the effect of a subsidy on the receiver's resource constraint: with an application to US local governments 1964-71.' Unpublished paper.

McKeough, W. Darcy (1975) *1975 Ontario Assistance to Local Governments and Taxpayers* (Toronto)

McLure, Charles E., Jr. (1967) 'The interstate exporting of state and local taxes: estimates for 1962.' *National Tax Journal* 20, 49-77

- (1975) 'Taxation and the urban poor in developing countries.' World Bank Staff Working Paper (Washington)

- (1976) 'The relevance of the new view of the incidence of the property tax in developing countries.' Paper prepared for the 15th Annual Conference of the Committee on Taxation, Resources, and Economic Development (Cambridge, Massachusetts)

Michas, N.A. (1969) 'Variations in the level of provincial-municipal expenditures in Canada: an econometric analysis.' *Public Finance* 24, 597-613

Mieszkowski, P. (1972) 'The property tax: an excise tax or a profits tax?' *Journal of Public Economics* 1, 73-96

- (1975) 'The distributive effects of local taxes: some extensions.' (Houston)

Ministry of Treasury, Economics and Intergovernmental Affairs (1968) *1967 Summary of Financial Reports of Municipalities* (Toronto)

- (1972) *Analysis of Income and Property Taxes in Guelph* (Toronto)
- (1973) *1972 Summary of Financial Reports of Municipalities* (Toronto)
- (1974) *1973 Municipal Financial Information* (Toronto)
- (1975) *1974 Municipal Financial Information* (Toronto)
- (1976a) *Ontario Statistics 1975* (Toronto)
- (1976b) *Reform of Property Taxation in Ontario* (Toronto)
- (1976c) Unpublished estimates (Toronto)
- (1976d) *Regional Government in Perspective* (Toronto)
- (1977a) *Major Growth Characteristics of the Personal Income Tax in Ontario: 1972-74* (Toronto)
- (1977b) *Index of Statistical Files in the Ontario Government 1976*

Montreal (1963) *Report of Study Committee of Real Estate Taxation, City of Montreal* (Montreal)

Moody, J.P. (1973) 'Measuring tax and benefit capitalization from a local rapid transit investment in the San Francisco Bay area.' Unpublished, University of California (Berkeley)

Morss, E.R. (1966) 'Some thoughts on the determinants of state and local expenditures.' *National Tax Journal* 19, 95-103

Musgrave, R.A. (1974) 'Is a property tax on housing regressive?' *American Economic Review, Papers and Proceedings* 64, 222-9

- *et al.* (1951) 'Distribution of tax payments by income groups: a case study for

1948.' *National Tax Journal* 4, 1-54

- K.E. Case, and H. Leonard (1974) 'The distribution of fiscal burdens and benefits.' *Public Finance Quarterly* 2, 259-312

Muth, R. (1960) 'The demand for non-farm housing.' Pp. 29-96 in A. Harberger (ed.), *The Demand for Durable Goods* (Chicago: University of Chicago Press)

National Revenue, Taxation (1975) *1973 Taxation Statistics* (Ottawa)

- (1976) *1974 Taxation Statistics* (Ottawa)

Netzer, Dick (1966) *Economics of the Property Tax* (Washington: The Brookings Institution)

- (1973) 'The incidence of the property tax revisited.' *National Tax Journal* 26, 515-36

New Brunswick (1973) *Report of the Task Force on Municipal Structure and Financing* (Fredericton)

Newfoundland and Labrador (1972) *Report of the Royal Commission on Taxation and Revenue of the City of St John's*

Noto, Nonna A. (1976) *The Effect of the Local Public Sector on Residential Property Values in San Mateo County, California.* Department of Research, Federal Reserve Bank of Philadelphia

Nova Scotia (1974) *Report of the Royal Commission on Education. Public Services and Provincial-Municipal Relations* (Halifax)

Nowlan, David M. (1976a) 'Value and use of land: the public connection.' *Urban Forum* 2, 13-22

- (1976b) 'Land conversion and land policy in the central city.' Paper presented at Canadian Economics Association Annual Meetings (Quebec City)

Oates, Wallace (1969) 'The effect of property taxes and local public spending on property values: an empirical study of tax capitalization and the Tiebout Hypothesis.' *Journal of Political Economy* 77, 957-71

- (1972) *Fiscal Federalism* (New York: Harcourt Brace Jovanovich)
- (1973) 'The effects of property taxes and local public spending on property values: a reply and yet further results.' *Journal of Political Economy* 81, 1004-8
- (ed.) (1975) *Financing the New Federalism* (Baltimore: John Hopkins)

O'Brien, Allan (1975) 'Father knows best: a look at the provincial-municipal relationship in Ontario.' Pp. 154-70 in D.C. Macdonald (ed.), *Government and Politics of Ontario* (Toronto: Macmillan)

O'Brien, T. (1971) 'Grants-in-aid: some further answers.' *National Tax Journal* 24, 65-77

Ohls, J.C. and T.J. Wales (1972) 'Supply and demand for state and local services.' *Review of Economics and Statistics* 54, 424-30

Oksanen, E.H. (1966) 'Housing demand in Canada, 1947 to 1962: some preliminary experimentation.' *Canadian Journal of Economics and Political Science* 32, 302-18

Oldman, Oliver and Henry Aaron (1965) 'Assessment-sales ratios under the Boston property tax.' *National Tax Journal* 18, 36-49

- and F.P. Schoettle (1974) *State and Local Taxes and Finance* (Mineola, NY: The Foundation Press, Inc.)

Ontario (1975a) Unconditional Grants Act

- (1975b) *Public Accounts 1973-4*

- (1977) Education Act

Ontario Budget (annual) (Toronto)

Ontario Committee on Taxation (1967) *Report.* 3 vols. (Toronto: Queen's Printer)

Ontario Economic Council (1976) *Housing – Issues and Alternatives* (Toronto)

Orr, L.L. (1968) 'The incidence of differential property taxes on urban housing.' *National Tax Journal* 21, 253-62

- (1970) 'The incidence of differential property taxes: a response.' *National Tax Journal* 23, 99-101

- (1972) 'The incidence of differential property taxes on urban housing: reply.' *National Tax Journal* 25, 217-20

Osman, J. (1966) 'The dual impact of federal aid on state and local government expenditures.' *National Tax Journal* 19, 362-72

- (1968) 'On the use of intergovernmental aid as an expenditure determinant.' *National Tax Journal* 21, 437-47

Paglin, M. (1975) 'The measurement and trend of inequality: a basic revision.' *American Economic Review* 65, 598-609

Paul, Diane B. (1975) *The Politics of the Property Tax* (Lexington, Mass.: Lexington Books, D.C. Heath and Co.)

Pechman, J.A. and B.A. Okner (1974) *Who Bears the Tax Burden?* (Washington, DC: The Brookings Institution)

Peterson, G. (1972) 'The regressivity of the residential property tax.' The Urban Institute, Working Paper no. 1207-10

Peterson, G.E. and A.P. Solomon (1973) 'Property taxes and populist reform.' *The Public Interest*, Winter 60-75

Pidot, G.B. Jr. (1969) 'A principal components analysis of the determinants of local government fiscal patterns.' *Review of Economics and Statistics* 51, 176-88

Ploeger, H.M. (1974) 'The deconditionalization of provincial-local grants.' *Municipal World* 261-6

Plunkett, T.J. (1974) 'The implications for decision-making of the dependence on conditional grants from senior governments and the property tax.' Pp. 612-20 in Canadian Tax Foundation, *1973 Conference Report* (Toronto)

- (1976) 'The property tax and the municipal case for fiscal reform.' *Canadian Public Policy* 2, supplement, 313-22

Poduluk, J.R. (1974) 'Measurement of the distribution of wealth in Canada.' *Review of Income and Wealth* 20, 203-18

Pogue, T.F. and L.G. Sgontz (1968) 'The effect of grants-in-aid on state-local spending.' *National Tax Journal* 21, 190-9

Polinsky, A.M. (1973) 'A note on the measurement of incidence.' *Public Finance Quarterly* 1, 219-30

- and D.L. Rubinfeld (1974) 'The long-run incidence of a residential property tax and local public services.' The Urban Institute, Working Paper no. 1207-29 (Washington, DC)

Pollakowski, H.O. (1973) 'The effects of property taxes and local public spending on property values: a comment and further results.' *Journal of Political Economy* 81, 994-1003

Prince Edward Island (1969) *Province of Prince Edward Island: Provincial-Municipal Fiscal Study.* Prepared by Touche, Ross, Bailey, and Smart

Quebec (1965) *Report of the Royal Commission on Taxation* (Quebec City)

Reid, M. (1962) *Housing and Income* (Chicago: University of Chicago Press)

Renshaw, E.F. (1960) 'A note on the expenditure effect of state aid to education.' *Journal of Political Economy* 68, 170-4

Ross, R.K. (1962) *Local Government in Ontario* (Toronto: Canada Law Book Company Ltd.)

Rowat, Donald C. (1969) *The Canadian Municipal System* (Toronto: McClelland and Stewart)

Royal Commission on Metropolitan Toronto (1975) *Update* (Toronto)

Royal Commission on Taxation (1966) *Report* (Ottawa)

Sacks, S. and R. Harris (1964) 'The determinants of state and local government expenditures and intergovernmental flow of funds.' *National Tax Journal* 17, 75-85

Select Committee of the Legislature on Taxation in Ontario (1968) *Taxation in Ontario: A Program for Reform* (Toronto)

Seligman, E.R.A. (1927) *The Shifting and Incidence of Taxation* (New York: Augustus M. Kelley, 1969)

Sharkansky, I. (1967) 'Some more thoughts about the determinants of government expenditures.' *National Tax Journal* 20, 171-9

Shibata, H. (1968) 'The tax mix.' Pp. 325-31 in Canadian Tax Foundation, *1967 Tax Conference* (Toronto)

Shoup, C.S. (1969) *Public Finance* (Chicago: Aldine)

- (1970) 'Tax reform.' Pp. D45-52 in Heinz Haller *et al.* (eds), *Theorie und Praxis des Finanzpolitischen interventionismus* (Tubirgen: J.C.B. Mohr)

Simon, H.A. (1959) 'The incidence of a tax on urban real property.' Pp. 416-35 in R.A. Musgrave and C.S. Shoup (eds), *Readings in the Economics of Taxation* (Homewood, Illinois: Richard D. Irwin Inc.)

Slack, N.E. (1977) 'The budgetary response of municipal governments to provincial transfers: the case of Ontario.' Unpublished PhD dissertation, University of Toronto

Smith, D.L. (1968) 'The response of state and local governments to federal grants.' *National Tax Journal* 21, 349-57

Smith, L.B. (1974) *The Postwar Canadian Housing and Residential Mortgage Markets and the Role of Government* (Toronto: University of Toronto Press)

Smith, R.S. (1970) 'Property tax capitalization in San Francisco.' *National Tax Journal* 23, 177-91

Sproule-Jones, M.H. (1975) *Public Choice and Federalism in Australia and Canada* (Canberra: Australian National University)

Statistics Canada (1969a) *Income Distribution by Size in Canada, 1969*

- (1969b) *Family Expenditure in Canada, 1969*
- (1974) *Principal Taxes and Rates*
- (1976) *National Income and Expenditure Accounts*
- (1977) *Fixed Capital Flows and Stocks 1972-76*

Stern, D. (1973) 'Effects of alternative state aid formulas on the distribution of public school expenditures in Massachusetts.' *Review of Economics and Statistics* 55, 91-7

Straszheim, M.R. (1973) 'Estimation of the demand for urban housing services from household interview data.' *Review of Economics and Statistics* 55, 1-8

Strauss, R.P. (1974) 'The impact of block grants on local expenditures and property tax rates.' *Journal of Public Economics* 3, 269-84

Struyk, R.J. (1970) 'Effects of state grants-in-aid on local provision of education and welfare services in New Jersey.' *Journal of Regional Science* 10, 225-35

Thurow, L.C. (1975) 'The economics of public finance.' *National Tax Journal* 28, 185-94

Tiebout, Charles (1956) 'The pure theory of local expenditure.' *Journal of Political Economy* 64, 416-24

Todres, E. (1976) 'The politics of tax credits: the Ontario tax credit system.' Unpublished PhD draft, University of Pittsburgh

Toronto, City of (1974) City Council Minutes

Tri-Level Task Force on Public Finance (1976) *Report* (Toronto)

Vickrey, W.S. (1972) 'Cumulative averaging after thirty years.' Pp. 117-23 in R.M. Bird and J.G. Head (eds), *Modern Fiscal Issues* (Toronto: University of Toronto Press)

Wales, T.J. and E.G. Wiens (1974) 'Capitalization of residential property taxes: an empirical study.' *Review of Economics and Statistics* 56, 329-33

Ward, R.L. (1973) 'Changes in municipal grants for 1973.' *B.M.R. Comment* (Toronto: Bureau of Municipal Research)

Weicher J.C. (1970) 'Determinants of central city expenditures: some overlooked factors and problems.' *National Tax Journal* 23, 376-96

– (1972) 'Aid, expenditures, and local government structure.' *National Tax Journal* 25, 573-83

Wertz, Kenneth L. (1976) 'Empirical studies of tax burdens: design and interpretation.' Pp. 115-22 in National Tax Association–Tax Institute of America, *Proceedings of 68th Annual Conference 1975* (Columbus, Ohio)

White, Hon. John (1973) 'A position paper on public finance.' National Tri-Level Conference, Edmonton

– (1974) *1974 Property Tax Stabilization Program* (Toronto)

Wicks, J.H., R.A. Little, and R.A. Beck (1968) 'A note on capitalization of property tax changes.' *National Tax Journal* 21, 263-5

Wilkinson, R.K. (1973) 'The income elasticity of demand for housing.' *Oxford Economic Papers* 361-77

Winger, A. (1968) 'Housing and income.' *Western Economic Journal* 6, 226-32

Woodard, F.O. and R.W. Brady (1965) 'Inductive evidence of tax capitalization.' *National Tax Journal* 28, 193-201

Wolfson, Michael C. (1977) 'Wealth and the distribution of income.' Paper presented at June 1977 meetings of the Canadian Economics Association

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15 Residential Property Tax Relief in Ontario

R.M. BIRD and N.E. SLACK

In the early 1970s the Ontario government responded to criticism of the regressive nature of the property tax by introducing the property tax credit and the property tax stabilization program. Although the two programs differ sharply in operation, both were designed, at least in part, to relieve the burden on the residential property owner. This study proceeds from a broad consideration of the role of the property tax in Ontario's fiscal system and the incidence of the residential property tax to a detailed appraisal of the effectiveness of these programs.

The authors conclude that the property tax itself may not be as regressive as the traditional view has assumed and, further, that property taxes might not be much different in the absence of the relief measures. These conclusions themselves raise crucial questions for policy-makers in the continuing discussion of the property tax.

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